Washington State
Department of Transportation

Measures, Markers and Mileposts

The Gray Notebook for the quarter ending
September 30, 2005

WSDOT's quarterly report to the Governor and the
Washington State Transportation Commission
on transportation programs and department management

Douglas B. MacDonald
Secretary of Transportation

What Gets Measured, Gets Managed

This periodic report is prepared by WSDOT staff to track a variety of performance and accountability measures for review by the Transportation Commission and others. The content and format of this report is expected to develop as time passes. Information is reported on a preliminary basis as appropriate and available for internal management use and is subject to correction and clarification. The *Gray Notebook* is published quarterly in February, May, August, and November. For an online version of this or a previous edition of the *Gray Notebook*, visit www.wsdot.wa.gov/accountability.

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Measures, Markers and Mileposts

The Gray Notebook for the quarter ending September 30, 2005
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Contents

Linking Measures to Strategic Objectives

The mission of WSDOT is to keep people and business moving by operating and improving the state's transportation systems vital to our taxpayers and communities.

Introduction

WSDOT's business plan is based on the policies, programs, and budgets adopted by the state Legislature, Governor, and Transportation Commission. WSDOT has important transportation system needs to meet through its day-to day work to build and operate state highways, manage the ferry system, and implement legislative instructions and program mandates. Everything comes together, however, in the overriding need to demonstrate the best possible return for every dollar of taxpayer investments and legislative appropriation. The *Gray Notebook* reflects this direction for accountability, communicating performance results for all key agency programs and activities.

Priorities of Government & Government Management Accountability and Performance

"Priorities of Government" (POG) is the statewide approach used by the Governor to identify results as the basis for budget decision-making. This approach facilitates strategic thinking and uses performance evidence to make investment choices that maximize results. POG looks at all state activities and how these activities contribute to the framework for the ten statewide results that citizens expect. WSDOT's Government Management Accountability and Performance (GMAP) forums support the POG process by continuously evaluating and improving the effectiveness of POG activities and reporting its progress in the *Gray Notebook*. Of the ten POG results, WSDOT has partial influence over three. The agency's strategic plan (2003-07 Business Directions) supports the following three POG results:

- Improve economic vitality of business and individuals
- Improve statewide mobility of people, goods, information and energy
- Improve safety of people and property

WSDOT's Strategic Plan

WSDOT actively supports these three POG goals through the agency's six overarching initiatives (objectives) as defined in the agency's strategic plan (2003-07 Business Directions). By tracking the progress of WSDOT's initiatives through the reporting of key performance measures, the *Gray Notebook* connects WSDOT's initiatives with these statewide outcome goals. The table below shows the six WSDOT initiatives and key related performance measures, as well as where and how the results are reported. Some of the data is available annually, such as bridge and pavement conditions, while other data is available quarterly. The reporting cycles for the individual measures reflect this. Note that the first three initiatives are directly linked to the three POG goals, while initiatives four through six indirectly support the POG goals through the achievement of WSDOT's organizational goals.

Strategic Initiative	**Performance Measure** Key Measures Include	**Description**	**Reporting Cycle**	**Last Report[1]**
1. Plan and build (deliver) capital investment projects for our transportation systems in accordance with the instructions of the legislature.	Schedule, Scope and Budget Summary of Nickel and TPA Projects	Planned vs. actual results of scope, schedule and budget	Quarterly	p. 6
	Project Delivery Milestone Reporting	Compares planned delivery milestone dates against actual completion dates	Quarterly	p. 5
	Highway Construction Program Advertisements	Planned vs. actual number of projects advertised	Quarterly	p. 40
	Cash Flow on Highway Construction Projects	Planned vs. actual expenditures for preservation and improvement programs	Quarterly	p. 38
	Individual Contracts: Final Cost to Award Amount	Percent of final cost above or below award	Annual	GNB 18 p. 37
	Pavement Conditions	Percent of pavement in good or poor condition (by type)	Annual	GNB 16 p. 50
	Bridge Conditions	Percent of bridges in good, fair or poor condition	Annual	p. 50
	Ferry Life Cycle Preservation Performance	Planned projects versus actual systems/ structures preserved, change in cost rating	Quarterly	p. 81

[1]When no *Gray Notebook* edition is indicated above, the measure can be found in this edition of the *Gray Notebook*. Previous *Gray Notebook* editions are available in the *Gray Notebook* Subject Index at www.wsdot.wa.gov/accountability/graybookindex.htm. When viewing this report electronically, edition numbers are hyperlinked to the respective *Gray Notebook* article.

Linking Measures to Strategic Objectives

Strategic Initiative	Performance Measure Key Measures Include	Description	Reporting Cycle	Last Report[1]
2. Maintain and operate the transportation facilities and systems placed under the department's responsibility, making cost-effective use of the appropriations provided by the Legislature from citizens' taxes.	Maintenance Accountability Process (MAP) targets	Rating for 22 highway maintenance activities	Annual	GNB 16 p. 58
	On-Time Performance: Amtrak *Cascades* and Ferries	Percent of trips on-time	Quarterly	p. 83 p. 80
3. Optimize the operational efficiency and safety of the transportation systems and facilities committed to WSDOT's charge.	Safety	Fatality rates (Bicyclist, pedestrian, vehicle) Before and After Collision Analysis for Safety Projects	Annual	GNB 9 p. 7 GNB 16 p. 43, 47-48
	Incident Response Clearance	Number of responses and overall average clearance time	Quarterly	p. 73
	Congestion: Peak Travel Times for Key Commute Routes	Percent of change in travel time performance for 20 Puget Sound Routes	Annual	p. 58
4. Report to the Transportation Commission, citizens, other officials and the legislature on achievements, shortcomings and challenges in WSDOT's performance.	Performance Reporting	*Gray Notebook*, web pages	Quarterly	
	No Surprises Reporting - Beige Pages	Reporting on capital program delivery	Quarterly	p. 1-34
	End of Season Highway Construction Summary	Design, construction management, schedule and cost evaluation	Annual	GNB 16 p. 40
5. Support the State Transportation Commission in preparing proposed budgets and plans for transportation systems and facilities	Biennial and annual budget proposals	Submit to commission by deadline	Annual	Budget Report
6. Assure the capability and efficiency of WSDOT's workforce.	Workforce Training	Compliance ratings for 17 training courses	Quarterly	p. 37
	Workforce Safety	Recordable injuries per 100 workers per calendar year	Quarterly	p. 35

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Transportation Benchmarks

In 2002, the Legislature passed RCW 47.01.012, instituting the transportation benchmarks recommended in 2000 by the Governor-appointed Blue Ribbon Commission on Transportation. The benchmarks require WSDOT to track data related to nine policy elements (see list below).

The benchmarks track transportation performance at a high level, reflecting social goals that are important to the health and safety of Washington State citizen, and to the efficiency of our state's transportation system. WSDOT does not have control over some of these benchmarks, for instance, the number of people who travel alone to work, or the number of miles they drive. However, the department can and does strive to offer people alternative methods to reach their destination. Similarly, WSDOT works in multiple ways to improve roadway, bridge, congestion, and safety conditions. The data is updated and published annually in the *Gray Notebook*.

- **Safety**
- **Roadway Pavement Condition**
- **Bridge Condition**
- **Non-Auto Share of Commute Trips**
- **Per Capita Vehicle Miles Traveled**
- **Administrative Efficiency**
- **Traffic Congestion and Driver Delay**
- **Transit Cost Efficiency**

Information regarding Benchmarks can be found at:

Gray Notebook Special Excerpt: Transportation Benchmarks 2005 Report: www.wsdot.wa.gov/accountability/benchmarks/default.htm

Annual Transportation Benchmarks Report: June 30, 2005 GNB, www.wsdot.wa.gov/accountability/Archives/graynotebookJun-05.pdf

Benchmarks Implementation Report: www.wsdot.wa.gov/accountability/benchmarks/BenchmarksImplementationReport.pdf

Navigating the *Gray Notebook*

How is the *Gray Notebook* Organized?

Measures, Markers and Mileposts, also called the *Gray Notebook*, provides in-depth reviews of agency and transportation system performance. The report is organized into two main sections. The *Beige Pages* report on the delivery of the projects funded in the 2003 Transportation Funding Package and the *White Pages* describe key agency functions and provide regularly updated system and program performance information. The *Gray Notebook* is published quarterly in February, May, August and November. This current and all past editions are available on-line at www.wsdot.wa.gov/accountability/
A separate detailed navigation folio is available at www.wsdot.wa.gov/accountability/GNB%20Folio.pdf

Beige Pages

The *Beige Pages* is WSDOT's project delivery performance report on the Nickel projects and other projects designated by the legislature in its 2003 Transportation Funding Package. It contains detailed narrative project summaries and financial information supporting WSDOT's "no surprises" reporting focus. See page one for details.

White Pages

The *White Pages* contain three types of transportation system and agency program performance updates:

Annual Performance Topics

System performance updates are rotated over four quarters based on data availability and relevant data cycles. Annual updates provide in depth analysis of topics and associated issues. Examples include Pavement Condition, Congestion and Bridge Condition.

Quarterly Performance Topics

Quarterly topics are featured in each edition as data is available more frequently. Quarterly topics include Highway Construction, Worker Safety, Incident Response, Washington State Ferries and Amtrak *Cascades*.

Special Topics

Selected Special Features and Program Highlights are provided in the back of each edition and focus on noteworthy items, special events and innovations.

Tracking *Business Directions'* Results

WSDOT's business plan, *Business Directions,* outlines the agency's strategic initiatives and associated activities. It reflects WSDOT's program and project delivery responsibilities with the goal of demonstrating the best possible return for taxpayers' dollars. The *Gray Notebook* complements the plan and tracks progress of the six key initiatives. For a copy of *Business Directions*, please visit: www.wsdot.wa.gov/accountability/2003-2007_Business_Directions.pdf

Gray Notebook Lite

WSDOT publishes a quarterly excerpt of key performance topics and "Nickel Project" summaries from the *Gray Notebook*, called *Gray Notebook Lite*. *Lite* allows for a quick review and provides a short synopsis of selected topics. It is published as a four page folio with a two page *Beige Page* summary insert and can be accessed at www.wsdot.wa.gov/accountability/lite.pdf

How to Find Performance Information

The electronic subject index gives readers access to current and archived performance information. The comprehensive index is easy to use and instantly links to every performance measure published to date. Measures are organized alphabetically within program areas. A click on the subject topic and edition number provides a direct link to that page. A copy of the subject index is also provided in the back of each edition. To access the index electronically, visit: www.wsdot.wa.gov/accountability/graybookindex.htm.

Project Reporting on the 2003 Transportation Funding Package

Introduction

WSDOT prepares information for legislators, state and local officials, interested citizens and the press on the progress of the program funded by the 2003 Transportation Funding Package. Much of the detailed information can be found on-line at the WSDOT website. The *Gray Notebook*, in these special *Beige Pages*, highlights each quarter's progress and reports on financial and other program management topics as well as detailed information on key projects.

The *Beige Pages* for this quarter are organized in the following manner:

- **Project Reporting**
- **Current Project Highlights and Accomplishments**
- **Project Delivery**
- **Financial Information**
- **Program Management Information**

We welcome suggestions and questions that can help us strengthen this project delivery and accountability reporting.

Overall, project reporting uses several different tools, including the *Gray Notebook*, web-based Project Pages, and Quarterly Project Reports (QPRs). There is a Project Page on the website for each major WSDOT project, and QPRs for Nickel funded projects in the 2003 Transportation Funding Package.

Navigation to the Home Page and the Project Pages

The Home Page (shown below) has several links that allow access to the individual Project Pages. The Accountability navigation bar provides access to the on-line version of the *Gray Notebook* which provides some project "hot links." The Projects navigation bar provides direct links to several of the state's largest projects and access to WSDOT's Projects Page. The Projects Page can also be accessed from any WSDOT web page by clicking on the "projects" tab at the top of every page. WSDOT's home page can be found at: www.wsdot.wa.gov/.

While WSDOT has developed user-friendly reports and front end applications to access project information on-line, it is important to note that the data used to generate these reports comes from antiquated legacy mainframe computer systems. Although the quality of the data is good, the time and effort needed to compile, verify and validate the data in these reports each quarter is considerable (in other words, these reports are the result of much manual input and effort, not the output of a modern project management information system).

This overall issue was addressed in two recently completed reports: one from the Joint Legislative Audit Review Committee titled, "Overview of Washington State Department of Transportation Capital Project Management" and a second report, commissioned by the Transportation Performance Audit Board, titled "Review of WSDOT's Use of Performance Measurement." In each of these reports, a key recommendation was made to conduct an assessment of the effectiveness of current information systems and options for addressing any deficiencies. See page 28 for more information.

Project Reporting on the 2003 Transportation Funding Package

Project Reporting

Project Information Roadmap

Home Page

Gray Notebook

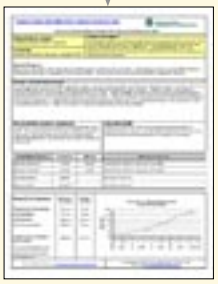
Project Pages

Project Pages report on all WSDOT 2003 Transportation Funding Package (Nickel) projects. Project Pages provide detailed information updated regularly:

- Overall Project Vision
- Financial Table, Funding Components
- Roll-up Milestones
- Roll-up Cash Flow, Contact Information
- Maps and Links QPR
- Quarterly Project Reports

Quarterly Project Reports (QPRs) summarize quarterly activities:

- Highlights
- Milestones
- Status Description
- Problem Statement
- Risks and Challenges
- Project Costs/Cash Flow
- Contact Information



Project Pages

Project Pages contain information on all aspects of a specific project. An existing Project Page is shown below.

Project Pages provide details on overall project vision, funding components, financial tables, milestones, status description, problem discussions, risks and challenges, forecasting, maps, photos, links and more.

Currently, approximately 230 Project Pages, of which 115 are Nickel Projects, provide on-line updates.

The Quarterly Project Reports are accessible through a link on the Project Page.

Project Pages provide a summary of the project status to date and are updated regularly to the best of WSDOT's ability. Project Pages can be found at: www.wsdot.wa.gov/projects/

Current Project Highlights and Accomplishments

Capital Construction Overview

The Capital Construction Program represents over 1,300 projects and $16.3 billion in planned expenditures. While the highway capital construction program represents the largest capital program at WSDOT, other capital projects include ferry vessels and terminals, rail projects, facilities, local programs, and the Tacoma Narrows Bridge. Funding of these projects includes a variety of fund sources, primarily Pre-Existing Funds (PEF) and 2003 Transportation Funding Package (Nickel) funds. The 2005 Transportation Funding Package provides a total of $7.1 billion for all capital programs for 2005 to 2021 ($6.7 billion for the Highway Construction Program).

The following *Beige Pages* provide information on the delivery of the 2003 Transportation Funding package.

Pre-Existing Funds project information is provided on a programmatic basis in the *White Pages* (Highway Construction Program, page 38). The *White Pages* provide information on meeting program advertisement dates, cashflow, details on the delivery of the Safety Improvement Program and selected project highlights and project updates on the Tacoma Narrows Bridge and Hood Canal Bridge projects.

Pre-Existing Funded Projects: 2005-2015

Capital Projects	Dollars in Millions
Facilities	118.6
Improvement Program	1,573.0
Preservation Program	2,771.8
Traffic	143.7
Ferries	1,303.9
Rail	47.6
Local Programs	39.3
Total	**$5,997.9**

2003 Transportation Funding Package: 2005-2013

Capital Projects	Dollars in Millions
Facilities	-
Improvement Program	2,693.2
Preservation Program	142.9
Traffic	-
Ferries	164.6
Rail	183.9
Local Programs	6.0
Total	**$3,190.6**

2005 Transportation Partnership Funding Package: 2005-2021

Capital Projects	Dollars in Millions
Facilities	-
Improvement Program	6,207.3
Preservation Program	508.1
Traffic	-
Ferries	185.4
Rail	118.3
Local Programs	120.9
Total	**$7,140.0**

Notes: All programmatic values are preliminary estimates and are subject to change after a full Plan, Specifications and Estimates (PS&E) is completed on a project basis. This *Gray Notebook* includes corrections to previously published numbers.
Source data: 2005 legislative final provided to WSDOT on April 25, 2005.

Current Project Highlights and Accomplishments

Project Delivery Summary Reports for Nickel Projects

This section of the Beige Pages provides overview and summary information on delivery milestones and targets for the 2003 Transportation Funding Package (Nickel) projects.

NEW: Reporting for six incremental Project Delivery Milestones for active Nickel projects.

Reporting on final Schedule, Scope and Budget for completed Nickel projects.

NEW: Schedule Milestone Reporting for Nickel Projects

With this edition of the *Gray Notebook*, WSDOT begins a new Beige Page section that summarizes information for six project delivery milestones for Nickel projects.

These milestones compare planned delivery milestone dates for each active Nickel project against the actual completion date for the milestone activity.

Milestones are indicators of progress for a project, but are not in themselves measurements of delivery effectiveness. For example, the "Environmental Documentation" milestone indicates whether a project has met the schedule for completion of an environmental impact statement or environmental assessment under NEPA. However, a slippage of this or other milestones may not affect the final milestone – the date the project is operationally complete. Should a project encounter milestone delay, WSDOT seeks, if possible, to adjust other activities, and find innovative solutions or alternatives to maintain the overall project schedule.

1. Project Definition Complete
Project definition is the preliminary picture of what a project will achieve and generally how it will do so. It includes deficiencies being addressed, the purpose for a project, location, and project information to the best available level. It is not a true project scope (that requires design effort) but it does support the first very preliminary cost estimate.

2. Begin Preliminary Engineering
A project schedule usually has two general phases, the pre-construction phase and the construction phase. Preconstruction involves design, right of way, and environmental activities. Beginning the preliminary engineering marks the start of the project design and is usually the first capital spending activity in delivery process.

3. Environmental Documentation Complete
The National Environmental Protection Act (NEPA) and the State Environmental Protection Act (SEPA) require that an appropriate level of environmental assessment be prepared for almost all WSDOT projects. Depending on the project, these can take the form of an Environmental Impact Statement (EIS) or another document of lesser scale, and these assessments end in the issuance of a Record of Decision (ROD) or other summary document. This milestone is the date that WSDOT will have finished and submitted to the appropriate regulatory agencies the documentation for the ROD and/or issuance of permits.

4. Right of Way Certification
Often WSDOT projects require the acquisition of right of way or property rights. The Right of Way Certification marks the point in time that right of way acquisition requirements are met and the process is complete for advertisement.

5. Advertisement Date
This is the date that WSDOT schedules to publicly advertise a project for bids from contractors. When a project is advertised, it has a completed set of plans and specifications, along with a construction cost estimate.

6. Operationally Complete
This is the date when the public has free and unobstructed use of the facility. In some cases, the facility will be open, but minor work items may remain to be completed.

Current Project Highlights and Accomplishments

Project Delivery Summary Reports for Nickel Projects

2003-2005 Biennium Nickel Projects Schedule Milestone Wrap-Up

The following table summarizes the milestone results for all Nickel projects that had one or more milestone activity in the 2003-05 biennium.

2005-2007 Schedule Milestone Tracking for Nickel Projects

In future quarters the current status of project delivery milestones will be reported as shown in the table below.

Milestone Activity	Total # of Projects with this Activity	Projects Early #	Projects Early %	Projects On-Time #	Projects On-Time %	Projects Delayed #	Projects Delayed %	Projects for which Activity has not yet begun	Projects for which Activity is not Applicable
Project Definition	25	0	0%	25	100%	0	0%	4	79
Begin Preliminary Engineering	55	4	7%	47	85%	4	7%	7	46
Environmental Documentation Complete	23	2	9%	18	78%	3	13%	22	63
Right of Way Certification	13	1	8%	9	69%	3	23%	39	56
Advertisement Date	40	15	38%	19	48%	6	15%	68	0
Operationally Complete	14	11	79%	2	14%	1	7%	94	0

Baseline Data: Baseline milestone dates are derived from the 2003 Legislative Transportation Budget. *Advertise Project* and *Operationally Complete* Milestones are considered on-time if completed within the scheduled baseline calendar quarter. All other milestones are reported as on-time if they are completed within +/- 6 weeks of baseline date.

Next Steps in Milestone Reporting

In future editions of the *Gray Notebook*, this report will expand to include a summary of three milestones for active Pre-Existing Fund (PEF) projects: Begin Preliminary Engineering, Advertisement Date, and Operationally Complete.

Baseline data for PEF projects reaches back to previous biennia and the legislative tracking system (TEIS) did not provide the appropriate coding to store such data. Historic PEF project baseline dates are currently being researched and analyzed for future milestone tracking and reporting purposes.

For the complete listing of each individual project and the respective milestone comparison, please visit our website at www.wsdot.wa.gov/Projects/PCR/.

Current Project Highlights and Accomplishments

Schedule, Scope and Budget Summary of Nickel Projects

As of September 30, 2005, 13 Nickel projects have been completed. No projects were completed in the first quarter of the 2005-07 biennium and the total reflects the same data as the June 30, 2005 Gray Notebook report. The table includes one data correction: SR 97 Entiat Park Entrance was advertised early.

Summary of Thirteen Nickel Projects Completed as of September 30, 2005

Project Description	On Time Advertised	On Time Completed	Within Scope	On Budget (Dollars in Thousands) Planned	Actual	
I-5 Roanoke Noise Wall[1]	✓	✓	✓	$3,500	$1,166	✓[1]
SR 9/SR 528 Intersection – Signal	✓	✓	✓	$ 710	$ 565	20% Under
I-90, Cle Elum River Bridge	✓	✓	✓	1,272	784	38% Under
I-90, Geiger Road to U.S. 2 Median Barrier	Early	Early	✓	781	781	✓
I-90, Highline Canal to Elk Heights – Truck Climbing Lanes	Early	Early	✓	4,200	4,483	2% Over [2]
I-90, Ryegrass Summit to Vantage – Truck Climbing Lanes	Early	Early	✓	8,389	8,389	✓
I-90, Sullivan – State Line Median Barrier	Early	Early	✓	1,040	973	6% Under
SR 97A, Entiat Park Entrance – Turn Lanes	Early[3]	Early	✓	196	136	31% Under
SR 124, East Jct SR 12 – Reconstruction	✓	✓	✓	295	295	✓
I-182/U.S. 395 Interchange – Roadside Safety	✓	Early	✓	76	59	22% Under
SR 203, NE 124th/Novelty Road Vicinity	✓	Early	✓	1,487	1,487	✓
U.S. 395, Kennewick Variable Message Sign	✓	Late	✓	332	308	7% Under
SR 500, NE 112th Ave. – Interchange	Early	Early	✓	21,300	21,300	✓
Cumulative Cost to Date				**$ 43,578**	**$ 40,726**	

Definitions:
"On Time Advertised": the project was advertised within the quarter as planned.
"On Time Completed": the project was operationally complete within the quarter as planned in the 03-05 Budget.
"Within Scope": the project was completed within the specific functional intent of a project as approved by the Legislature.
"On Budget": within +/- 5% of the baseline budget.
Section 503 at the 2004 Supplemental Budget provides the Transportation Commission flexibility to balance project cost increases and decreases between Nickel projects, and to balance cash flow between biennia near biennial lines, as long as the adjustment does not impact the overall delivery of the ten-year program and does not involve changing the scope of any Nickel funded project.

Project Details:
1. Stage 1 complete, Stage 2 under construction
2. During excavation for the new lane, a large amount of saturated clay was found; this increased the cost of construction.
3. Correction made, project was advertised early.

Current Project Highlights and Accomplishments

Summary of Project Advertisements and Awards

The following section reports on quarterly developments in the delivery of the 2003 Transportation Funding (Nickel) Package for the quarter ending September 30, 2005.

This section of the Beige Pages will focus on project delivery resulting from adjustments adopted by the Legislature or Transportation Commission and passed in the 2004 Supplemental Budget or the 2005 Transportation Budget and development of the 2005-07 Capital Improvement and Preservation Program.

The project information is gathered from a variety of sources within WSDOT and is principally the responsibility of the various regional administrators and their project teams.

As a regular part of WSDOT's project management and accountability strategy for the Legislature's 2003 Transportation Funding Package, a team of senior WSDOT managers from Olympia meet in each region every quarter to review the progress and status of each project, offer assistance, support, and coordination of issues or problems arising with any project. This process also facilitates the ability of headquarters staff to discuss project status with legislative members and staff and to report firsthand to the Secretary, Governor, and Transportation Commission.

2003 Nickel Projects To Date

Completed projects (13) - see recap on previous page

Projects Advertised and Awarded (26)

I-5, 2nd St. Bridge – Replace Bridge
I-5, Salmon Creek to I-205
I-5, Pierce County Line to Tukwila – HOV
I-5, South 48th to Pacific Avenue – Core HOV
I-5, NE 175th St. to NE 205th St. – NB Lane
I-5, SR 526 to Marine View Dr.
U.S. 12/SR 124 to McNary Pool – Add Lanes
SR 16, 36th St. to Olympic NW – HOV
SR 16/I-5 to Tacoma Narrows Bridge – HOV
SR 18, Covington to Maple Valley Highway
SR 24, I-82 to Keys Road
SR 31, Metaline Falls to International Border
I-90, Pines Road to Sullivan Road – Widen
I-90 Argonne Road to Pines Road – Widen
I-90, Eastbound Ramps to SR 18 – Signal
SR 106, Skobob Creek – Fish Passage
SR 161, 204th to 176th St.
SR 161, 234th Street to 204th St. E
SR 161, Jovita Blvd. to South 360th St.
SR 240/I-182 to Richland Y – Add Lanes
SR 240, Richland Y to Columbia Center Interchange
SR 395, NSC – Francis Ave. to Farwell Rd.
SR 527, 132nd St. SE to 112th St. SE
SR 7/SR 507 to SR 512 – Safety
SR 9/SR 522 to 228th St SE – Widening
SR 9, 228th St SE to 212th St SE (SR 524)

Projects Advertised, Pending Award (2)

SR 202, Junction 292nd Ave SE
SR 3/SR 303 Interchange (Waaga Way) – New Ramp

Awarded Projects

The total amount for the 39 awarded projects is $621 million, $2 million below the pre-bid engineer's estimate of $623 million. Two projects have been advertised and are pending award. These projects are not included in the engineer's estimate of $623 million.

Delayed/Deferred Projects (7)

1) ***SR 9, Nooksack Rd. Vicinity to Cherry Street***
Because of right of way issues as described in June 30, 2003 *Gray Notebook*, the project is now scheduled for advertisement in October 2005.

2) ***I-90, Seattle to Mercer Island***
WSDOT delayed the advertisement date for this project by 13 months, from December 2004 to January 2006, to allow time for the issuance of the draft Environmental Impact Statement (EIS).

3) ***SR 167, 15th St. SW to 15th St. NW – HOV***
Because funding uncertainties had caused the design of this project to sit "on the shelf" for many years, additional time was needed for redesign of stormwater treatment, wetland mitigation, and floodplain investigations to meet today's applicable environmental requirements. This project now has a planned advertisement date in December 2005.

4) ***SR 270, Pullman to Idaho State Line***
The advertisement date was previously delayed approximately 10 months, from January 2005 to November 2005, to make necessary changes to the design plan as reported in the June 2004 *Gray Notebook*. Ongoing development of environmental documentation regarding wetlands and water quality mitigation has required the project to be further delayed from November 2005 until March 2006. Contract plan preparation is 85% complete. Right of way has been acquired for 20 of 27 parcels with four others having reached agreement, two in condemnation, and three in negotiation.

5) ***SR 522, Bothell – UW Campus Access***
The additional funding needed for construction from the Legislature, University of Washington, and General Administration did not materialize during the 2003-05 biennium. As a result, this project is now scheduled for advertisement in March 2006.

6) ***SR 522/I-5 to I-405 Multi-Modal Project***
Because of the benefits of coordinating work with the City of Lake Forest Park, the project was deferred to the 2005-07 biennium.

7) ***SR 543/I-5 to International Boundary***
See pg. 17, "Updated Projects from the Watch List since June 30, 2005".

Current Project Highlights and Accomplishments

Contract Advertising and Awards
2003 Transportation Funding Package ("Nickel Funds")

Projects Advertised this Quarter:

SR 3/SR 303 Interchange (Waaga Way) – New Ramp
This project builds a direct connection ramp from northbound SR 3 to southbound SR 303, as well as a new ramp connecting northbound SR 303 directly to southbound SR 3. The project was advertised on August 22, 2005 and bids will open in October.

SR 202, Junction 292nd Avenue SE
This project constructs turning lanes and installs a new traffic signal at the intersection of SR 202 and 292nd Avenue SE. It was advertised in September 2005, with bid opening planned for mid-October 2005.

Current Project Highlights and Accomplishments

Construction Highlights

Highway Construction Program

I-5, 2nd Street Bridge – Replace Bridge
The old bridge over I-5 in Mount Vernon was demolished in October 2004. The new bridge is wider and taller (18'-7") than the old structure, which had the lowest clearance (14'-4") along I-5 between Canada and Mexico. The new bridge will open to traffic in October 2005. Trucks will no longer be required to detour off I-5 and onto city streets. Once the bridge is open, crews will remove the construction falsework and begin installing drainage along SR 536.

I-5, Salmon Creek to I-205
This project adds lanes on a two-mile bottleneck segment of I-5 between NE 99th Street and NE 134th Street in Vancouver, including the replacement of two bridges over Salmon Creek and one over I-5. The new bridge over I-5 and one of the new bridges over Salmon Creek are completed. The I-5 traffic has shifted onto the completed bridge over Salmon Creek in order to construct the other bridge. Wet soils and an unexpected underground spring have presented challenges to construction, adding to the project cost by an as-yet-undetermined amount. All lanes are scheduled to be open to traffic in January 2007.

I-5, Pierce County Line to Tukwila – HOV
This project widens I-5 between South 320th Street and the Pierce County Line by adding an HOV lane to relieve congestion. Construction on this project stage began in Spring 2005. Traffic has shifted outward away from the I-5 median between South 320th Street in Federal Way and the Pierce County line. The contractor has nearly completed earthwork and drainage work. Walls are being built between the north and south bound lanes where there is not enough room for a sloped median. Construction of bridge columns has begun at the 336th and SR 18 crossings. The paving has been completed at the south end of the project, allowing the WSP turnaround at the Pierce County Line to be opened. This project is scheduled to be completed in December 2007.

I-5, South 48th to Pacific Avenue – Core HOV
Construction work began in August with stormwater pond excavation and drainage system construction. The contractor has successfully pipe-jacked three 24" drainage conduits under I-5. Utility relocation work continues and is being coordinated with the highway construction project contractor. Fences along the northbound roadway are currently being relocated, and retaining wall construction will begin soon. The highway project is expected to be complete by June 2008.

I-5, NE 175th Street to NE 205th Street – NB Lane
This project adds an additional lane on I-5, between the northbound NE 175th Street on-ramp and the NE 205th Street exit in Shoreline, to relieve congestion and improve safety for merging traffic. Traffic was switched to the newly rebuilt median so the contractor could start construction on the new northbound auxiliary lane. Crews are currently working on retaining and noise walls on both sides of the freeway in anticipation of grading for the new northbound lane.

SR 9/SR 522 to 228th Street SE – Widening &
SR 9, 228th Street SE to 212th Street SE (SR 524)
The project was awarded to Wilder Construction Company on July 18, 2005. Construction activities through the end of September 2005 have included installation of temporary water pollution and erosion control protection elements, and initiation of drainage work on 240th Street SE. Construction of three stormwater detention ponds will be on-going through the end of October.

U.S. 12/SR 124 to McNary Pool - Add Lanes
This project constructs two additional lanes on 3.6 miles of U.S. 12 and a frontage road, a total of approximately 10 new lane miles. It is the second of five phases that will provide a four-lane section of U.S. 12 from SR 124 to the Wallula vicinity. This is part of an overall, long-range plan to complete a four-lane highway from Burbank to Walla Walla.

Work began in January 2005 and is currently 97% complete. The new permanent signals at the Humorist Road and SR 124 intersections with U.S. 12 were in place and functioning on September 14, 2005. Work continues on minor items. The project is scheduled to be operationally complete by October 2005, which is within the original schedule.

SR 16, 36th Street to Olympic NW – HOV
Summer construction has progressed as planned. The final overlay and pavement markings have been completed in the westbound direction. The widening work on the eastbound on ramp at Olympic Drive is also complete. The eastbound overlay and pavement markings along with an adjacent noise wall are expected to be complete Spring 2006.

Current Project Highlights and Accomplishments

Construction Highlights

SR 16/I-5 to Tacoma Narrows Bridge – HOV

Approximately 400,000 cubic yards of earth were excavated, several stormwater ponds constructed and six retaining walls completed. Two noise walls are under construction. All the drilled shafts for the bridges are completed. The columns at the Snake Lake structures were poured and the falsework is being installed for the eastbound bridge widening. Piers 2 and 3 are nearly complete for the Center Street Bridge and the steel girder components are being delivered to the project site. The abutments have been built and the prestressed girders placed at the 12th Street bridge. The piers at the 6th Avenue Bridge are complete and falsework is being installed for the cast-in-place box girder. The piers at the Pearl Street Bridge are nearly complete.

SR 18, Covington to Maple Valley Highway

The current contract landscapes this section of SR 18, which was recently constructed under a separate contract. Preparation of the planting beds began in June 2005 and is now complete. Periodic weeding and maintenance will be performed during Fall 2005 and early Winter 2006. Planting is expected to begin in January and be completed in late Spring 2006, followed by a four year plant establishment maintenance period. The work is on schedule and within budget.

SR 24, I-82 to Keys Road

The contractor, Max J. Kuney, finished the piers on the first stage of the I-82 interchange bridge. Eighty percent of the foundation work for the new Yakima River bridge is complete and work has started on the columns and cross beams. The contractor began roadway work this quarter; the first order of work was constructing a new city access street for the project, which is nearing completion.

This project is projected to overrun reimburseable utility agreements by $150,000. The contract plans did not clearly define proposed utility locations and conflicts with work after relocations. This additional cost will be covered by current project funds.

SR 31, Metaline Falls to International Border

This project constructs an all-weather highway and replaces the Sullivan Creek Bridge. This is a multi-phased project with two contracts. On the first contract, Metaline Falls to International Border, construction activities resumed in early May 2005 after being shut down for the winter. Excavation of the slopes and building of the roadway embankments is about 85% complete. Other ongoing activities include excavation of a large rock cut, including installing rock bolts and drainage culverts. The contract is on schedule with construction planned during the 2005 and 2006 construction seasons. On the second contract, Sullivan Creek Bridge, a geotechnical report is being completed and the bridge design is 90% complete. Advertisement is planned for January 2006.

I-90, Pines Road to Sullivan Road – Widen & I-90, Argonne Road to Pines Road – Widen

This project constructs one additional lane in each direction on I-90 in the Spokane area. Reconstruction of the westbound lanes commenced in March 2005. Concrete-paving began in May. A project completion ceremony is planned for November 14, 2005 at 10:00 A.M. This project will be open to traffic by November 14, 2005 and traffic will have full and unrestricted use of the facility through the winter. Due to weather restrictions for the permanent inset stripping, final striping will be accomplished in the Spring.

SR 161, 204th to 176th Street & SR 161, 234th Street to 204th Street E

The section between 234th Street E and 204th Street E opened to traffic in August. Minor work will continue through mid-September. The roadway between 200th Street E. and 194th Street E. was successfully lowered during a weekend closure in mid-July. This will result in a safer highway when the project is completed. Roadway widening is complete. Work continues on utility relocations and traffic signal systems. Final overlay and traffic striping work is underway on the north project and is expected to be complete ahead of schedule in October 2005 along with the new signal at 200th Street.

SR 161, Jovita Boulevard to South 360th Street

The project is more than 50% complete as of September 2005. Construction crews are nearly finished building retaining walls and have begun widening the roadway. Some sections of SR 161 between Military Road and S. 360th Street are being paved. Drainage pipe installation is nearly complete. The new culvert under SR 161, which will prevent flooding and improve fish passage and habitat in Hylebos Creek, has been installed. The project continues to be on schedule and within budget.

SR 240/I-182 to Richland Y – Add Lanes & SR 240, Richland Y to Columbia Center Interchange

Activities during the last quarter include construction of a roadway embankment for the new eastbound lanes (approximately 80% complete), completion of clearing and grubbing, and construction of storm water retention ponds. Construction of bridge structures I-182/14 and SR 240/15 are well

Current Project Highlights and Accomplishments

Construction Highlights

underway with girders being placed and bridge retaining walls nearly complete. Construction of the 11-acre wetland mitigation sight has started. The closed circuit television camera has been placed with operation to start in October 2005. Currently the project is ahead of schedule and within budget.

U.S. 395, NSC – Francis Avenue to Farwell Road

This project constructs two lanes of the North Spokane Corridor between Francis Avenue and Farwell Road and completes the grading between U.S. 2 and Wandermere. The project will have four contracts. The first contract, Farwell Road Lowering, opened Farwell Road to traffic in June 2005 and will be completed under estimated costs. The second contract, Gerlach to Wandermere Grading, has completed the roadway clearing work; 40% of the roadway excavation and embankment is completed. The U.S. 2 detour was opened to traffic in September 2005 and the Market Street haul road crossing has also been completed. Design is underway for the remaining two contracts, Francis Avenue to U.S. 2 – grading and paving and Francis Avenue to U.S. 2 – structures.

SR 527, 132nd Street SE to 112th St. SE

This project will construct one new lane in each direction with a two-way left-turn lane from 132nd Street SE to 112th Street SE to increase safety and reduce congestion. This is a partnership project with the city of Everett. The contractor completed and opened the south portion of the project (132nd Street SE to 121st Street SE) in September. On the northerly portion of the roadway (121st Street SE to 112th Street SE), traffic was shifted to the newly constructed east half of the roadway in July. The contractor is currently constructing the west half of the roadway.

Transportation Partnership Account Projects

Western Washington Cable Barrier

This project constructs 38 miles of cable guardrail in six different counties across six different highways. The project will help to prevent head-on collisions caused by drivers crossing the median and entering oncoming traffic. The contract was awarded to Peterson Brothers, Inc. of Sumner on August 16, 2005 and was executed on September 16, 2005 for $3.5 million dollars. The contractor is currently manufacturing concrete sleeves used in the cable barrier system and will manufacture enough sleeves to start work after Thanksgiving. Work is expected to be completed Spring 2006.

Current Project Highlights and Accomplishments

Other Highlights and Accomplishments

Highway Construction Program

I-5, NE 134th Street Interchange

WSDOT has completed a Value Engineering Study for this project. The project team is analyzing the results and modifications to the interchange design that may yet be proposed. The Environmental Assessment (EA) draft discipline reports are complete. The Draft Biological Assessment (BA) will be completed in October along with the Modified Access Point Decision Report. The EA process is on schedule for the Spring 2006 deadline. A cost risk assessment is planned for Winter 2005.

WSDOT has been working with Clark County Public Works on an agreement for funding the design, right of way, construction and project management on this project. Clark County Public Works has verbally agreed to take the lead role in project management and funding of the project. Recent Federal SAFETEA-LU funds of $10 million was earmarked for this project. WSDOT will provide Nickel funds to Clark County through an inter-agency agreement to fund the state elements of the project.

SR 99, Aurora Avenue N Corridor Project

The city of Shoreline is the lead agency for this project, which constructs northbound and southbound transit and HOV lanes on SR 99 between North 145th and North 165th Streets. Construction began in July 2005 with roadway realignment and re-striping to shift traffic to the east side of the highway. Temporary traffic signs and signals have been installed to accommodate the shift. Crews are currently removing existing traffic medians and other structures. Work has begun on drainage, watermain, underground utilities, and pedestrian overpass improvements and will continue through the end of 2005. All lanes are scheduled to be open to traffic by December 2006.

I-405/SR 520 to SR 522

The I-405 Kirkland Nickel project has succeeded in awarding the first stage of the project one year ahead of schedule. This congestion relief project addresses the "Kirkland Crawl". Stage One of the Kirkland Nickel project will construct one additional lane in each direction on I-405 from NE 85th Street to NE 124th Street. The request for proposals for design-build was published on July 15, 2005. On September 26, 2005 the contract was awarded for $47.5 million. Work will begin immediately following execution of the contract in October 2005. The close coordination efforts of the Multi-Agency Permitting Team and local jurisdictions allowed all permit approvals to be received in time to meet this schedule. The first stage project is expected to open to traffic in December 2007, also one year early.

Other Capital Programs – Ferries

Anacortes Multimodal Terminal

In 1997, Washington State Ferries completed a master plan for a new Anacortes Multi-Modal Terminal. Project elements over the next ten years include upland improvements for site circulation, replacement and expansion of the terminal building, and relocation of the tie-up slips to deeper water. One of the relocated tie-up slips will include a new access trestle capable of loading and unloading service vehicles. The design report for the tie-up element of the project was completed in August 2004. Plans and specifications were completed in July 2005. The Anacortes Multimodal project is using the General Contractor Construction Manager (GCCM) delivery method. The GCCM contractor will assume the role of construction manager, responsible for the constructability review of the design documents and for value engineering. WSF has selected the GCCM contractor and contract execution is pending. Thirty percent of the design documents were completed in July 2005.

Project Delivery

Proposed Adjustments to Delivery Planning

Highway Construction Program

I-5/SR 526 to Marine View Drive – HOV

This project will widen I-5 for the construction of northbound and southbound HOV lanes between SR 526 and the vicinity of Marine View Drive. The project also includes: northbound and southbound auxiliary lanes between 41st Street and U.S. 2; a new right-hand exit for carpools, vanpools, and buses; widening or replacement of 21 bridges; noise walls at certain locations; and stormwater treatment facilities.

An advancement of $55 million from the 2007-09 biennium into 2005-07 is requested to accelerate the schedule of payment to the Design-Builder to achieve faster completion of the project. The current restriction limits the payments not to exceed $100 million for work completed before July 2007. These restrictions limit the Design-Builder's productivity. Advancing $55 million cash flow will result in substantial completion by December 2007 and save $400,000 in financing costs.

I-5/SR 502 Interchange and SR 502, Widening from I-5 to Battle Ground

WSDOT will construct a new interchange connecting Interstate 5 (I-5) to SR 502 and will widen the existing SR 502 from two to four lanes between Duluth and Battle Ground. These two projects, which are managed as one corridor, will reduce accident risks on I-5 and SR 502, provide a direct connection to Battle Ground at SR 502, and provide congestion relief on local roads.

Design and right of way activities are underway to meet a Fall 2006 advertisement date for the interchange. The widening project from I-5 to Battle Ground is funded by a combination of Nickel and Transportation Partnership Account funds and is scheduled for advertisement in 2011.

To provide for a smooth transition from the existing alignment of SR 502 (219th St.) to I-5, WSDOT will construct three-fourths of a mile of the SR 502 widening as part of SR 502 interchange project. WSDOT is requesting an acceleration of $8 million of the corridor widening funds to pay for right of way for the corridor portion of the interchange project and cover additional costs of right of way for the interchange project. These projects remain on budget and on schedule.

SR 7/SR 507 to SR 512 – Safety

The project was awarded September 27 to Scarsella Bros., Inc. Agreement in principal has been reached with WSDOT's funding partners (Pierce County and a local developer) that they will cover the higher than expected construction costs shown in the bid to be associated with their work included in the project. The resulting project cost is approximately $2 million above the current Nickel Account budget. The project will have a groundbreaking ceremony October 28, 2005 and it is expected to be complete by February 2007.

SR 9, 212th Street SE to 176th Street SE

Stage 3 (212th SE to 176th SE) widens SR 9 to five lanes including left turn lanes and sidewalks in selected locations.

WSDOT will be purchasing the entirety of two parcels needed for the recently awarded SR 9/228th Street SE to 212th Street SE (Stage 2) contract because the originally proposed partial acquisitions would have left remainders with no economic development value. Since the properties appear to be suitable for use as stormwater treatment and mitigation sites for the Stage 3 project, WSDOT is proposing to purchase these parcels using Stage 3 right of way funds. Doing so will require advancing the Stage 3 right of way start date from January 2008 to October 2005 and shifting $700,000 from the 2007-09 biennium to the 2005-07 biennium.

U.S. 12/Attalia Vicinity – Add Lanes &
U.S. 12, Attalia Vicinity to U.S. 730 – Add Lanes

In the June 2005 Gray Notebook, several factors were identified that resulted in cost increases and schedule impacts to this project. The new projected cost of the project in Nickel funds is $15 million as contrasted with the original estimate of $10.3 million. WSDOT is requesting that the cost increase of $4.7 million be approved in order to keep the project on schedule and move forward with the delivery of this critical project. The advertisement date is schedule for December 2005.

SR 99 – Alaskan Way Viaduct

The 2005 Legislature provided $142 million in Nickel funding in the 2005-07 biennium for preliminary engineering. After the Legislative session, the project received $231.2 million of new federal SAFETEA-LU funding that will be used for engineering, right of way acquisition, and early construction. The project team is proposing to shift Nickel funding into a later biennium since the new SAFETEA-LU funds will allow it to progress at the pace provided for by the Legisla-

ture. WSDOT proposes to move $83 million of the Nickel funds into the 2007-09 biennium and $19 million into the 2009-11 biennium while shifting $77 million into the right of way phase. This change permits the timing of the Nickel funds to match the need for State matching of the expected flow of federal funds and also allows earlier than previously expected acquisition of right of way.

SR 160/SR 16 to Longlake Road Vicinity

In order to provide Puget Sound Energy with enough time to relocate overhead transmission lines prior to project advertisement in early 2009, the right of way acquisition phase of this project needs to be advanced into the 2005-07 biennium. The advancement of the right of way phase will also help minimize real estate cost escalation impacts to the project budget. WSDOT proposes to advance $1.1 million in right of way funding from 2007-09 into the 2005-07 biennium.

U.S. 395, NSC-Francis Avenue to Farwell Road &
U.S. 395, NSC-U.S. 2 to Wandermere & U.S. 2 Lowering

WSDOT is proposing to advance funding on the NSC – U.S. 2 to the Wandermere & U.S. 2 Lowering project. The revised expenditure plan proposes to advance $8.5 million from the 2009-11 biennium into the 2005-07 biennium. This advancement allows for the two Shady Slope structures to be constructed ahead of the U.S. 2 Lowering contract. By advancing these two structures, traffic can be moved ahead of time, which will reduce impacts to the public and save contract time, and which will significantly reduce the risk of a late ribbon cutting. These transfers do not result in a net change in the Nickel funding for these two projects. The region is investigating project design changes to reduce costs and developing alternative funding proposals to address the projected $32 to $37 million overall shortfall in funding for the North Spokane Corridor Nickel projects.

Opportunities and Options for Legislation Consideration

Highway Construction Program

SR 522, Snohomish River Bridge to U.S. 2 (Stage 5)

Where safety and congestion concerns go hand in hand, this critical corridor has been widened to a modern four-lane highway from Woodinville (Route 9) to Paradise Lake Road. Two sections remain: Paradise Lake Road to Snohomish River Bridge (3.6 miles west of Snohomish River) and Snohomish River Bridge to Monroe (U.S. 2, 4.2 miles). The 2003 Legislative Funding Package provided funding for the Snohomish River Bridge to Monroe section and stipulated that the middle section, Paradise Lake Road (including an interchange) to Snohomish River Bridge, would be funded through the Regional Transportation Improvement District (RTID) program. RTID funding has not materialized. The mid-corridor section that RTID would have funded (Paradise Lake Road to Snohomish River Bridge widening and Interchange) has higher traffic and much greater safety needs than the last section reaching U.S. 2 in Monroe.

There is an opportunity to avoid the cost of redesign and re-permitting for half of the remaining portion of SR 522. The section from Paradise Lake Road to the Snohomish River Bridge (Western Half) was designed and permitted as part of the ongoing construction project. Those permits will expire in 2006/07 if the construction of the Western Half does not move forward. Costly additional mitigation and permit conditions would then be required to match current criteria. The widening project west of the river could be constructed starting Spring 2007 and be completed by Fall 2009. The Paradise Lake Road Interchange project is currently 70% designed and would need two to three years to finish design, complete environmental documentation and acquire all right of way. This project could be constructed starting Spring 2009 and be completed by Fall 2011.

WSDOT is requesting that the Legislature shift the funding from Stage Five and fund the Paradise Lake Road to Snohomish River Bridge and Paradise Lake Road Interchange as described above.

SR 539, Tenmile Road to SR 546

As reported in the June 2005 *Gray Notebook,* the amount designated by the Legislature for this project in 2003 proved to be too low because the rapid rise in right of way costs in this corridor was not adequately taken account of by WSDOT in its cost estimate. To keep the project moving, as reported earlier, WSDOT has shifted $9.8 million in construction funds from 2007-09 and 2009-11 to use to complete right of way purchases in 2005-07. With the remaining construction funds (about $58.3 million), WSDOT can proceed with a "Phase 1" construction program taking the widening to about the south city limits of Lynden with the scheduled October 2007 advertisement date.

The remaining work would then reside in a "Phase 2" project for which additional funds would be required. Changes in the right of way process are being investigated which would allow WSDOT to accelerate the property acquisition process for Phase 2. If these changes cannot be made, then the earliest the right of way for Phase 2 would be acquired would most likely be October 2008.

In August 2005, a Cost Risk Assessment was done to verify the funding requirements for this project. Analysis of the results has just started and our findings will be reported next quarter.

2003 TRANSPORTATION FUNDING PACKAGE - PROPOSED ADJUSTMENTS TO PROJECT DELIVERY (Dollars in Thousands)

Project	Prior			05-07			07-09			09-11			11-13			13-15			Future			Total by Project
Proposed Quarter 1 Budget Versus Last Approved Budget	Budget*	Q1 Budget**	Net Change	Budget*	Q1 Budget**	Net Change	Budget*	Q1 Budget**	Net Change	Budget*	Q1 Budget**	Net Change	Budget*	Q1 Budget**	Net Change	Budget*	Q1 Budget**	Net Change	Budget*	Q1 Budget**	Net Change	Budget*	Q1 Budget**	Net Change
I-5/SR 526 to Marine View Drive	13,032	11,578	(1,454)	112,968	169,422	56,454	88,000	33,000	(55,000)	-	-	-	-	-	-	-	-	-	-	-	-	214,000	214,000	0
I-5/SR 502 Interchange	2,542	2,632	91	7,458	14,976	7,518	24,730	25,730	1,000	-	-	-	-	-	-	-	-	-	-	-	-	34,730	43,338	8,608
SR 7/SR 507 to SR 512 - Safety	127	-	(127)	9,173	11,056	1,883	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9,300	11,056	1,756
SR 9, 212th St SE to 176th St SE	619	423	(195)	1,115	2,042	927	11,585	10,885	(699)	14,183	14,151	(33)	34,789	34,789	-	-	-	-	-	-	-	62,290	62,290	0
U.S. 12, Attalia Vicinity - Add Lanes	1,383	716	(667)	6,449	11,806	5,357	2,501	2,500	(1)	-	-	-	-	-	-	-	-	-	-	-	-	10,333	15,022	4,689
SR 99, Alaskan Way Viaduct	41,254	31,169	(10,085)	135,746	43,831	(91,915)	-	83,000	83,000	-	19,000	19,000	-	-	-	-	-	-	-	-	-	177,000	177,000	-
SR 160/SR 16 to Longlake Road Vicinity	0	159	159	-	1,134	1,134	1,973	397	(1,576)	1,910	2,192	282	-	-	-	-	-	-	-	-	-	3,883	3,882	(1)
U.S. 395, North Spokane Corridor	48,894	44,492	(4,402)	50,472	63,467	12,995	54,110	54,017	(93)	35,500	27,000	(8,500)	-	-	-	-	-	-	-	-	-	188,976	188,977	1
SR 502, Widening from I-5 to Battle Ground	377	442	65	904	-	(904)	6,114	1,350	(4,764)	7,605	4,000	(3,605)	-	-	-	-	-	-	-	600	600	15,000	6,392	(8,608)
Previously approved adjustments not reflected in 2005 Legislative Final budget.	58,626	56,394	(2,231)	160,138	177,858	17,720	34,183	26,776	(7,406)	623	711	88	-	-	-	-	-	-	-	-	-	253,569	261,739	8,170
All other projects 25th month adjustments to correct prior biennium expenditures.	334,307	305,888	(28,419)	695,818	733,131	37,313	651,635	648,563	(3,072)	376,027	373,008	(3,019)	187,160	184,161	(2,999)	22,246	22,246	-	111,000	111,115	115	2,388,526	2,388,444	(82)
Total***	501,160	453,895	(47,265)	1,180,242	1,228,724	48,482	874,830	886,219	11,389	435,848	440,061	4,213	221,949	218,949	(2,999)	22,246	22,246	-	111,000	111,715	715	3,347,274	3,361,810	14,534

Notes:

* "Budget" column is defined as the last approved adjustment to 2005 Leg Final Budget.

** "Adjusted Budget" column is defined as the current quarter proposal to 2005 Leg Final Budget.

*** The "Prior" biennium "Budget" total includes projects completed in 03-05 and not reflected in the 2005 Leg Final Budget. 03-05 25th month amounts are used.

"Watch List" Projects – Cost and Schedule Concerns

Updated Projects from the "Watch List" since June 30, 2005

Highway Construction Program

SR 4, Svensen's Curve – Realignment

This project continues to experience difficulties with right of way acquisition. WSDOT made offers for all affected land parcels by mid July 2005. The two parcels still in negotiations are considered high risk acquisitions. WSDOT was recently informed that one of the parcels has a new tenant on site. A tenant relocation plan will begin in early October.

WSDOT has reported the right of way acquisition difficulties and challenges this project has encountered in previous quarterly *Gray Notebook* reports. Right of way acquisition/ negotiations continues to be the project's highest risk activity. Right of way has experienced inflation, and high-risk property acquisition have resulted in increased costs. WSDOT anticipates that an additional $480,000 of Right of Way funds will be needed.

Additional engineering costs in the amount of $110,000 are also being incurred as the construction estimate has been updated to reflect increased costs. WSDOT anticipates the need to add $560,000 to this project's construction budget.

In total, WSDOT anticipates the need for a $1.15 million increase in Nickel Funding for this project. A proposed adjustment to the project's budget will be presented in next quarter's report.

I-5, Chehalis River Flood Control

In coordination with the U.S. Army Corps of Engineers, Lewis County, and WSDOT, this project was expected to develop a comprehensive flood hazard management project that would provide flood relief for communities in the Chehalis River Basin and for I-5. If the project is to go forward, a new funding package is required due to the lack of funds from the Corps of Engineers for its planned contribution. The Corps of Engineers estimates an additional $70 million is needed to fully fund the project. Due to the new funding package requirements and the recent storm and flooding in Mississippi, Louisiana, and Texas, it is unlikely that the Corps of Engineers will receive funding. WSDOT is currently evaluating options for this project.

I-5, Salmon Creek to I-205 – Widening

The widening of the new northbound lanes is nearly complete. Paving operations necessary to complete the northbound widening are currently underway. Subsurface drainage conditions have delayed the traffic shift onto the new northbound lanes. Measures have been taken to mitigate subsurface water conditions by using deep wells to allow for installation of an underdrain system. All work on the northbound lanes is currently scheduled to be completed in November 2005. Once the traffic has been shifted, work will begin on the southbound widening and it is expected that the same subsurface drainage conditions exist. The June 30th *Gray Notebook* indicated that the project would need an additional $3 million to complete. A more recent cost to complete analysis is indicating the need will be closer to $4 million. This project will continue to be reported in the "Watch List" until all cost impacts are finalized.

SR 9, Nooksack Rd Vicinity to Cherry St

In the June 2005 *Gray Notebook*, WSDOT reported that the project team would be reviewing the construction estimate to see if the existing budget could accommodate a $600,000 design and right of way cost increase. The project team has determined that there are sufficient funds in the construction funding, so the design and right of way funding shortfall will be covered by a shift in funds from the construction phase to the design and right of way phases.

Right of way negotiation and acquisition on remaining parcels continues. In addition, WSDOT is preparing to advertise another major roadway improvement project on nearby SR 543 (I-5 to International Boundary) in November. Delaying project advertisement from November to December 2005 and staggering the SR 9 and SR 543 advertisement periods may result in more competitive bids.

SR 270, Pullman to Idaho State Line

The advertisement date was previously delayed 10 months, from January 2005 to November 2005, to make necessary changes to the design plan as reported in the June 2004 *Gray Notebook*. Ongoing development of environmental documentation regarding wetlands and water quality mitigation has required the project to be further delayed from November 2005 until March 2006. Contract plan preparation is 85% complete. Right of way has been acquired for 20 of 27 parcels with four others having reached agreement and three in negotiation.

SR 522/I-5 to SR 405 Multimodal Project

Contract documents will be ready for a Spring 2006 advertisement, but the project team is facing other challenges to the project schedule, primarily related to the acquisition of property in an urban area complicated by access management

"Watch List" Projects – Cost and Schedule Concerns

issues. A project advertisement date will be set next quarter when it is expected that the outstanding right of way issues have been resolved.

Recently, one property was subdivided and sold, requiring re-appraisal of the two resultant properties. Providing onsite parking for one of the subdivided parcels will be challenging because the existing building footprint leaves little room to accommodate replacement parking. Many properties within the project limits have multiple driveways on SR 522, so managing and coordinating highway access with property owners is taking much longer than initially anticipated.

Several major utilities will be relocated as a result of this project and coordination with the utility companies is ongoing. Utility relocations are normally completed before contract award, once the right of way needed for the relocations is secured. Because right of way acquisition has been slowed by the factors identified above, WSDOT is looking into allowing the utilities to perform relocations while the contract is underway.

SR 543/I-5 to International Boundary

As reported in previous editions of the *Gray Notebook*, this project's original cost estimate has proved to require constant adjustment. This is based primarily on two factors: right of way costs and difficult soil conditions. Costs continue to be a challenge on this project. However, the projects still on schedule to advertise for bids on November 14, 2005. To remain within budget, WSDOT plans to advertise the project for a limited scope with alternatives to add scope if bid levels permit. The alternate bidding process allows WSDOT to stay within the intent of the project and provide the flexibility to defer or reinsert certain elements (alternates) of the project as funding allows. The elements included in the awarded contract will be based on the contractor's bid for the alternate elements and our available funding level. Bids are scheduled to be opened in the middle of January 2006.

Other Capital Programs – Rail

Vancouver Rail Project

This project will construct capacity improvements and a road/rail grade separation that includes a by-pass of the rail/freight yard and a 39th Street grade separation. Property acquisition is underway at this time.

WSDOT has received the 30% design documents for the project from BNSF Railway Company. The preliminary cost estimates for both the rail and roadway elements of the project as shown in the design documents prepared by the railroad far exceed the amount budgeted for the project. Both WSDOT and BNSF recognize that there will need to be modifications made to the railways preliminary design. WSDOT completed an extensive engineering review of the documents and identified causes of the increases and opportunities to reduce costs. A formal value engineering review is scheduled for the week of November 7 - 10 and will include BNSF, the City of Vancouver, department staff, and consultants. Information from the informal review will be used during the value engineering review to assist in identifying additional opportunities to reduce costs.

Cascade and Columbia River Upgrade

$890,000 of Nickel funds were allocated to upgrade the rail line serving Oroville lumber and wood chip shippers to accommodate larger and more efficient 286,000-pound cars.

BNSF Railway has notified Cascade and Columbia River (CCR) Railroad that BNSF will not provide as many specialized rail cars as in the past. If shippers can't get rail cars, they may switch to truck hauls and the rail line would cease to be financially sustainable. The CCR line operator is working on this issue.

Due to rising steel costs, the provided level of Nickel funding is not sufficient to upgrade the entire line. The operator hasn't decided whether to proceed with the rehab project. WSDOT will continue to gather information and assess the situation.

Geiger Spur Connection

For security reasons, Fairchild Air Force Base will not allow non-military rail traffic to cross the base after 2009. This action will leave Airway Heights industrial customers without a link to the mainline rail system. The Spokane community wants to preserve rail access to this industrial area, and planned to replace the segment of the line that crosses the base with a new connection to the PCC Central Washington line.

In June 2005, Spokane County, in collaboration with WSDOT, selected an engineering firm to begin preliminary design and develop an updated engineering estimate. When Watco, a short-line railroad company, decided to abandon the Central Washington line, Spokane County revised their engineering consultant's contract to analyze alternate rail linkages that might preserve rail service. The state has allocated $5 million to construct a new rail link. WSDOT won't proceed with construction funding until the community has a revised project scope that completes a link with available funds.

"Watch List" Projects – Cost and Schedule Concerns

New Items Added to the "Watch List" since June 30, 2005

Highway Construction Program

I-205, Mill Plain Exit (112th Connector)

The City of Vancouver is responsible for the design and right of way phases of this project. The project was put on hold this summer so that a better understanding could be gained of its relationship with the Transportation Partnership project, *Mill Plain Interchange to NE 28th Street*. The City of Vancouver resumed design work after it and WSDOT resolved the project overlap issues; however, this delay may move the project's construction start to Summer 2006. This project is added to the Watch List until the project team assesses the current impacts to the schedule.

SR 20, Fredonia to I-5 – Widening

In June 2005, WSDOT proposed to construct the project in two stages. This would mitigate schedule delays resulting from extensive public comment received during the access hearing, in turn, that delayed right of way acquisition. Under this proposal, Stage 1 would construct the 2.1 mile section beginning at the SR 536/SR 20 intersection and continue to the east side of the Higgins/Airport Way intersection. Stage 1 advertisement would occur in October 2006 as planned. Stage 2 would construct the remaining 2.9 mile section from west of Avon Allen Road to east of the SR 20/I-5 interchange. The planned advertisement would be January 2008, subject to possible further delay if appeals to the Access Hearing Finding and Order are taken.

The project team is pursuing a new wetland mitigation site because of concerns that a private mitigation bank proposed to be used for this project would not be approved in time for Stage 1 advertisement. The additional time required to survey, perform studies on, and develop plans for this new site will delay the environmental permit schedule. A recovery plan to minimize the effect of permitting delay has been developed.

The project team is projecting a design funding shortfall resulting from additional costs for the new wetland mitigation site, Access Hearing appeals, and project staging. The overall project estimate is being evaluated to determine if the increase can be accommodated within the existing budget.

Financial Information

2003 Transportation Funding Package: Paying for the Projects

The first *Beige Pages* (June 2003) displayed the revenue assumptions underlying the 2003 Transportation Funding Package. The revenue forecast has now undergone numerous updates. Legislative action since 2003 has also affected underlying assumptions, primarily to reduce the expected distribution of revenue from vehicle title fees. The following information incorporates the September 2005 forecast projections. Further refinements to debt service estimates have also been made.

Revenue Forecasts

2003 Transportation Funding Package Highlights:
Deposited into the Transportation 2003 (Nickel) Account (established by the 2003 Legislature)

- 5¢ increase to the gas tax
- 15% increase in the gross weight fees on trucks

Deposited into the Multimodal Account (established in 2000)

- An additional 0.3% sales tax on new and used vehicles
- A $20 license plate number retention fee

Forecast Update

The accompanying charts show the current projected revenues over the next ten years (for the 2003 Funding Package sources) as forecasted in September 2005 by the Transportation Revenue Forecast Council. This forecast is compared to the Legislature's assumed 'baseline' projections used in the budget-making process in March 2003. Both cumulative ten-year totals and individual biennial amounts are shown.

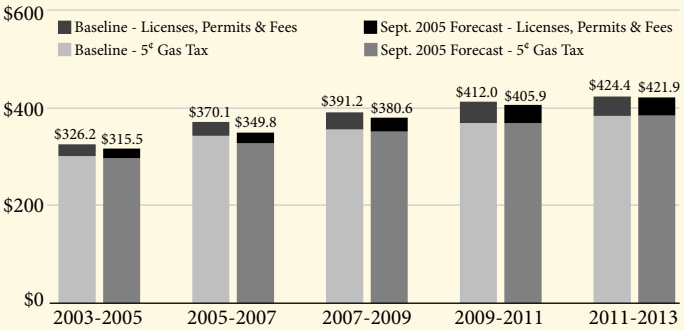
Forecast comparisons include actual revenue collection data to date as well as updated projections based on new and revised economic variables. The September 2005 forecast of the 2003 Funding Package includes two months' worth of actual revenue receipt information for gas tax and licenses, permits, and fees for the 2005-07 biennium.

Over the initial ten-year period (2003-2013), gas tax receipts for the Transportation 2003 (Nickel) Account decreased slightly (0.5%) from the June 2005 forecast. The forecast for licenses, permits, and fees showed no change. Overall, these factors have caused a slight decrease (0.5%) in the ten-year outlook for the account.

In the Multimodal Account, projections both for vehicle sales and the plate retention fees are higher than the June 2005 forecast, resulting in a slight increase in the ten-year outlook (0.4%). Forecasted revenues are still closely aligned with the legislative baseline projection.

Transportation 2003 (Nickel) Account Revenue Forecast
March 2003 Legislative Baseline Compared to September 2005 Transportation Revenue Forecast

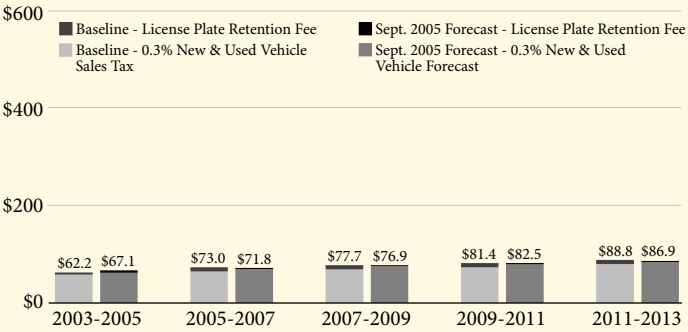
Dollars in Millions



Cumulative Baseline Total: $1,924.0 m
Cumulative Sept. 2005 Forecast Total: $1,873.7 m

Multimodal Account (New Sources) Revenue Forecast
March 2003 Legislative Baseline Compared to September 2005 Transportation Revenue Forecast

Dollars in Millions



Cumulative Baseline Total: $383.1 m
Cumulative Sept. 2005 Forecast Total: $385.1 m

Bond Sales Plan for Authorizations Provided by the 2003 Transportation Funding Package

The 2003 Transportation Funding Package contained two new bond authorizations:

- Gas tax bonds: authorization of $2.6 billion
- State General Obligation (GO) bonds: authorization of $349.5 million

The proceeds from these gas tax bonds are used to fund highway projects. The debt service is paid by the revenue generated from the nickel increase in the gas tax. The proceeds from the state GO bonds are used to fund rail and ferry projects. Debt service for these bonds is paid from the Multimodal Account. Receipts from the 0.3% sales tax on new and used vehicles are deposited to the Multimodal Account and augment rental car tax receipts and other fees already directed to this account.

2005-2007 Biennium

The Legislature appropriated $940.0 million in proceeds from the gas tax bonds and $49.7 million from the state GO bonds. The first bond sale for the biennium took place in August 2005. To date $170 million gas tax bonds have been sold and no multimodal bonds. The total bond sale plan for the 2005-07 biennium is anticipated to be $883.3 million of gas tax bonds and $48.5 in multimodal bonds. The table below has more detailed information on the August 2005 bond sale and the remaining planned bond sales for the biennium.

2005-2007 Bond Sale Plan

		2003 Transportation (Nickel) Account Bonds			Multimodal Bonds (GO Bonds)		
Date of Sale	**Assumed Interest Rate**	**2005-07 Bond Sale Plan**	**RCW 47.10.861 Amount Sold**	**True Interest Cost**	**2005-07 Bond Sale Plan**	**RCW 47.10.867 Amount Sold**	**True Interest Cost**
August 2005	5.00%	$170,000,000	$170,000,000	4.38%	0	0	N/A
January 2006	5.00%	$185,000,000			0		
July 2006	5.00%	$275,000,000			$14,000,000		
January 2007	5.00%	$253,332,000			$34,514,000		
Total Bond Sale Plan		$883,332,000			$48,514,000		
Net Bond Sale Premium		$422,000			$1,170,000		
Total Bond Proceeds		**$883,754,000**			**$49,684,000**		

Transportation 2003 (Nickel) Account

The Transportation 2003 (Nickel) Account was established in the state treasury to be the repository for the revenue raised by the nickel gas tax increase and the associated increases in various vehicle licenses, permits and fees. Proceeds of bonds issued under the $2.6 billion gas tax bond authorization are deposited to this account. Uses of the account include funding cash payments for highway and ferry projects identified by the Legislature, and debt service payment and other associated costs for bonds sold to provide debt financing for highway projects. Since gas tax receipts are deposited to this account, the uses are restricted to highway purposes as required by the 18th Amendment of Washington's Constitution.

The Transportation 2003 (Nickel) Account financial plan has been updated to reflect the enacted 2005-07 budget passed by the Legislature in April 2005 as well as the legislative projected out-year plan. The September 2005 revenue forecast has been incorporated and WSDOT's supplemental budget request for 2006 has been included. The financial plan displayed below incorporates the adjustments to the improvement program as discussed in the *Proposed Adjustments to Delivery Planning* section of this edition of the *Gray Notebook* (pp. 13-14), but also includes other anticipated supplemental budget adjustments to both the improvements and preservation programs. Because the financial plan is a forward-looking document, the plan below will not match the *Proposed Adjustments to Delivery* table presented on page 16, which is not inclusive of all supplemental budget adjustments.

This plan brings together all of the projected sources (tax revenue, bond proceeds, interest earnings) and uses (expected cash flow needs, ten-year projected program expenditures including newly enacted revenues and expenditure plans from the 2005 Legislature, and debt service) for this account.

For the initial ten-year period (2003-2013) gas tax receipts forecasted decreased from the June 2005 forecast ($8.5 million) while the forecast for licenses, permits, and fees did not change. Changes to the actual sources and uses of funds have been updated to reflect the most current forecast. The updated *pro forma* predicts by the end of 2013-15 an ending balance of $34.1 million. To compare with previous quarters Beige Pages, the ending balance for 2011-13, the end of the initial ten-year period, is projected to be $3.0 million. The June 2005 *pro forma* predicted a $22.4 million ending balance for 2011-13. This change is primarily due to a reduction of planned bond proceeds needed to complete the projects after taking into account funding needs for the current anticipated expenditure plan. Key economic factors, actual tax receipts, future legislative action, and interest rates will continue to change over time. Future updates to forecasts, including actual and revised assumptions pertaining to bond sales and debt service, will continue to change the projected final ending balance.

Transportation 2003 (Nickel) Account Pro Forma
2003-2005 Budget and Ten-Year Financial Plan
September 2005 Forecast with 2005 Enacted Revenues and Expenditures with WSDOT's 2006 Supplemental Budget Request
(Dollars in Millions)

	05-07	07-09	09-11	11-13	13-15	Ten-Year Total
Balance Forward from Previous Biennium	$133.1	$5.7	$9.5	$13.4	$3.0	
Sources:						
Gas Tax Revenues (new 5¢)	326.8	351.2	368.9	382.0	392.7	1,821.6
Licenses, Permits and Fees Revenues	23.0	29.5	36.9	38.4	39.6	167.4
Interest Earnings	7.8	0.7	1.0	0.8	1.4	11.7
Transfers from Other Accounts	0.5	0.0	0.0	0.0	0.0	0.5
Bond Proceeds (includes bond premium)	883.8	863.0	400.0	171.0	0.0	2,317.8
Federal Funds	0.0	0.0	0.0	0.0	0.0	0.0
Local Funds	0.0	0.0	0.0	0.0	0.0	0.0
Total Sources of Funds	**$1,241.8**	**$1,244.3**	**$806.8**	**$592.3**	**$433.7**	**$4,319.0**
Uses:						
Cost of Bond Issuance	2.3	2.2	1.0	0.4	0.0	5.9
Bond Sale Underwriters Discount	7.0	6.5	3.0	1.3	0.0	17.7
Debt Service Withholding	102.6	243.6	332.1	369.6	378.9	1,426.8
Highway Improvements	1,220.6	888.4	439.4	220.2	2.4	2,771.0
Highway Preservation	1.7	1.7	0.0	7.3	21.3	32.0
Washington State Ferry Construction	35.0	98.3	27.4	3.9	0.0	164.6
Total Uses of Funds	**$1,369.2**	**$1,240.6**	**$802.9**	**$602.8**	**$402.6**	**$4,418.0**
Biennium Ending Balance	**$5.7**	**$9.5**	**$13.4**	**$3.0**	**$34.1**	**$34.1**

Financial Information

Multimodal Transportation Account

The Multimodal Transportation Account was established in 2000 as the repository for tax revenues and operating and capital expenditures not restricted by the 18th Amendment. Both the 2003 and 2005 Funding Packages direct receipts to the Multimodal Account. The 2003 Transportation Funding Package directs receipts from the additional 0.3% sales tax on new and used vehicles and the license plate number retention fee. The most significant pre-existing tax deposited to this account is the rental car tax. The 2003 Funding Package also directs proceeds from the $349.5 million state GO bonds authorization to this account.

Because of the mix of pre-existing funds, 2003 funds, and 2005 funding being deposited into the Multimodal Account, the impact of the 2003 Funding package on this account is less clear-cut.

As shown on page 20, forecasts of revenue generated by the 2003 Funding Package are closely aligned with the legislative baseline.

The ten-year financial plan for the Multimodal Account with all of its funding sources and associated expenditure plans is displayed on the following page. The Multimodal Account is projected to maintain a positive cash balance in 2005-07 and remains positive throughout the ten-year period, currently projecting an ending balance of $134.4 million by the end of the 2013-15 biennium.

As with the Transportation 2003 (Nickel) Account, key economic factors, actual tax receipts, future legislative action, and interest rates will continue to change over time. Future updates to forecasts, including actual and revised assumptions pertaining to bond sales and debt service, will continue to affect the projected final ending balance.

Multimodal Transportation Account

Multimodal Account Pro Forma
Ten-Year Financial Plan
September 2005 Revenue Forecast with 2005 - 2007 Enacted Budget and Expenditure Plan with WSDOT's 2006 Supplemental Budget Request
(Dollars in Millions)

	05-07	07-09	09-11	11-13	13-15	Ten-Year Total	
Balance Forward from Previous Biennium	$32.9	$32.2	$62.3	$84.5	$91.2		
Sources:							
Licenses, Permits Fees Distribution	16.7	17.7	18.5	19.2	20.1	175.0	
Vehicle Weight Fees & Motor Home Fees	82.8	117.2	121.4	125.6	129.8	494.1	◄ Funding source from the 2005 Funding Package
Rental car tax	45.6	50.7	54.9	58.8	62.8	272.8	
Sales Tax on New & Used Car Sales	71.0	76.1	81.7	86.1	90.9	405.9	◄ Funding source from the 2003 Legislative Package
Miscellaneous Income	3.0	3.6	5.4	6.5	8.3	26.8	
Bond Proceeds	48.5	134.2	84.5	38.7	0.0	305.8	◄ Bond Authorization from the 2003 Legislative Package
Transfers from Other Accounts	21.2	21.6	21.8	21.9	22.3	108.7	
Federal Revenue	18.3	9.2	7.4	7.6	5.1	47.4	
Local Revenue	8.4	2.0	0.0	0.0	0.0	10.4	
Total Sources of Funds	**$315.5**	**$432.3**	**$395.5**	**$364.4**	**$339.3**	**$1,847.0**	
Operating Uses:							
Cost of Bond Issuance	0.1	0.3	0.2	0.1	0.0	0.8	
Bond Sale Underwriters Discount	0.4	1.0	0.6	0.3	0.1	2.4	
Debt service	6.1	18.9	36.6	49.5	51.3	162.4	
CTR Tax Credits	5.5	6.0	6.0	6.0	6.0	29.5	
Transfers to Other Accounts & Agencies	29.4	44.2	43.7	48.2	48.0	213.4	
WSDOT Program Support & Planning	7.0	6.8	7.0	7.2	4.7	32.7	
Aviation	1.0	1.0	1.1	1.2	1.2	5.5	
Public Transportation	56.8	55.6	58.9	61.4	63.8	296.5	
Public Transportation	28.9	45.4	46.4	47.0	48.0	215.6	◄ Projects Funded from the 2005 Funding Package
WSF Maintenance and Operations	3.7	3.5	4.3	4.5	7.4	23.4	
Rail Operations	36.2	37.2	38.1	40.1	41.1	192.7	
Rail Operations	0.2	5.0	5.0	5.0	5.0	20.2	◄
Local Programs	0.2	0.2	0.2	0.2	0.3	1.2	
Total Operating Uses of Funds	**$175.5**	**$225.1**	**$248.2**	**$270.6**	**$276.9**	**$1,196.2**	
Capital Uses:							Projects funded primarily from bonding authority provided in the 2003 Funding Package
WSF Construction	13.2	63.0	51.2	1.8	1.5	130.8	◄
Rail Capital	61.0	80.8	40.5	42.4	3.3	228.0	◄
Rail Capital	27.9	21.2	26.5	35.9	7.4	119.0	◄ Projects Funded from the 2005 Funding Package
Local Programs	31.2	7.0	7.0	7.0	7.0	59.2	
Local Programs	7.4	5.0	0.0	0.0	0.0	12.4	◄
Total Capital Uses of Funds	**$140.8**	**$177.0**	**$125.2**	**$87.1**	**$19.2**	**$549.3**	
Total Uses of Funds	$316.3	$402.1	$373.4	$357.7	$296.1	$1,745.5	
Biennium Ending Balance	**$32.2**	**$62.3**	**$84.5**	**$91.2**	**$134.4**	**$134.4**	

2005 Transportation Funding Package: Looking Forward to 2005-2007 and Beyond

The 2005 Legislative Session enacted a new funding package in April 2005. Like the 2003 Funding Package, the 2005 Package ties funding to specific projects and programs. Attaining the Legislature's 16-year expectation on program delivery from the 2005 Transportation Funding Package requires that the underlying revenue and all the amounts intended to be raised through bond sales be available to meet program needs. Throughout the implementation of the 2005 Funding Package, actual revenue receipts, revenue forecasts, and other financing assumptions must be continually monitored, updated, and related to actual and projected expenditures. This section begins to address these issues.

2005 Transportation Package Revenue Sources

- 9.5¢ Increase to the gas tax phased in over four years
  - 3.0¢ in July 2005
  - 3.0¢ in July 2006
  - 2.0¢ in July 2007
  - 1.5¢ in July 2008
- New vehicle weight fees on passenger cars
  - $10 for cars under 4,000 pounds
  - $20 for cars between 4,000 and 6,000
  - $30 for cars between 6,000 and 8,000
- Increased combined license fees for light trucks
  - $10 for trucks under 4,000 pounds
  - $20 for trucks between 4,000 and 6,000 pounds
  - $30 for trucks between 6,000 and 8,000 pounds
  - Farm vehicles are exempt from the increase
- A $75 fee for all motor homes
- Fee increases to various driver's license services
  - Original and renewal license application increased to $20 (previously $10)
  - Identicards, Driver Permits and Agricultural
- Permits increased to $20 (previously $15)
  - Commercial Driver License and Renewal increased to $30 (previously $20)
  - License Reinstatement increased to $75 (Previously $20)
  - DUI Hearing increased to $200 (previously $100)
- Fee increases to various license plate charges
  - Reflectorized Plate Fee increased to $2 per plate (previously 50¢)
  - Replacement Plates increased to $10 (previously $3)

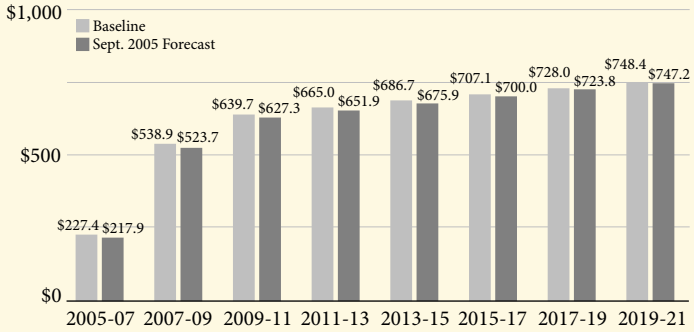
Forecast Update

The chart below shows the current projected new gas tax revenues over the next 16 years as forecasted in June 2005 by the Transportation Revenue Forecast Council, compared to the Legislature's assumed baseline projections used in the budget-making process in March 2005. Both cumulative 16-year totals and individual biennial amounts are shown.

Forecast comparisons include actual revenue collection data to date as well as updated projections based on new and revised economic variables. Actual revenue collections can change cash flow projections, both positively and negatively. If actual revenue collections are lower than anticipated, monies available in the fund are reduced; conversely, revenue collections higher than anticipated positively affect available monies for project funding.

The September 2005 forecast includes two months of actual revenue receipt information. Gas tax receipts over the 16-year period decreased slightly (-0.3%) from the June 2005 forecast. Forecasted revenues are closely aligned with the legislative baseline projection.

Transportation Partnership Account
Gas Tax Revenue Forecast
March 2005 Legislative Baseline Compared to September 2005 Transportation Revenue Forecast Council
(Dollars in Millions)



Cumulative Baseline Total: $4,941.2 m
Cumulative Sept. 2005 Forecast Total: $4,867.8 m

Bond Sales Plan for New Authorizations Provided by the 2005 Transportation Funding Package

The 2005 Transportation Funding Package includes a new bond authorization of $5.1 billion.

The proceeds from these gas tax bonds are used to fund specific highway projects. The debt service is paid by the revenue generated from the programed increase in the gas tax.

2005-2007 Biennium

For the 2005-07 biennium, the Legislature appropriated $400 million in proceeds from the gas tax bonds. The table below shows the proposed bond sales plan for the 2005-07 biennium. The interest rate assumed for planning purposes on all bond sales this biennium is 5%. The first bond sale for this new authorization was originally planned to be $70 million. However, due to the uncertainty presented by Initiative 912 and at the direction of the State Finance Committee, WSDOT made no bond sale request for the August 2005 sale. A revised bond sale plan will be developed and presented in future editions of the *Gray Notebook*.

Sixteen-Year Plan

As noted, the 2005 Transportation Funding Package included a gas tax backed bonding authorization of $5.1 billion. The table below presents the projected 16-year plan for future bond sales. If interest rates turn out to be more favorable, monies in the fund available for cash financing will increase due to lower debt service payments; conversely, sales at a higher rate will decrease availability of monies for cash funding due to higher debt service requirements.

Transportation Partnership Account Bond Sale Plan

(Dollars in Millions)

	2005-07	2007-09	2009-11	2011-13	2013-15	2015-17	Total
Authorization: RCW 47.10 Amount Authorized: $5.1 billion	$400	$1,128	$1,375	$1,306	$820	$71	$5,100

Financial Information

Transportation Partnership Account

The Transportation Partnership Account was established in the state treasury to be the repository for the revenue raised by the gas tax increases enacted in 2005. Proceeds of bonds issued under the $5.1 billion gas tax bond authorization will be deposited to this account. Uses of the account include cash funding of highway and ferry projects identified by the Legislature, and paying debt service and other associated costs for bonds sold to provide debt financing for highway projects. Since gas tax receipts are deposited to this account, the uses are restricted to highway purposes as required by the 18th Amendment of Washington's Constitution.

Future editions of the *Gray Notebook* will include a 16-year financial plan which will show the projected *Sources* (tax revenue, bond proceeds, interest earnings) and *Uses* (2005-07 appropriations, 16-year projected program expenditures, and debt service) for this new account. Changes to projected sources and uses of funds will be updated quarterly to reflect the most current forecasts. As changes, either positive or negative, are incorporated into the plan, the ending balances in the outer biennia will be affected. Key economic variables, tax receipts, and interest rates will change over time. Future updates to forecasts as well as inclusion of actual receipts will impact the future fund balance.

Freight Mobility Investment Account

The 2005 Legislature also created the Freight Mobility Investment Account. This account receives a statutory distribution from combined license fees and passenger vehicle weight fees. Uses of funds in this account are for specified projects relating to freight mobility.

Multimodal Transportation Account

The Multimodal Transportation Account was established in 2000 as the repository for tax revenues and operating and capital expenditures not restricted by the 18th Amendment. The 2005 Transportation Funding Package directs receipts to this account from the new passenger vehicle weight fees, the $75 motor home fee, and increases to various fees for drivers' licenses and related services. Both pre-existing revenues and the 2003 Funding Package also direct funds into this account as discussed in the *Beige Pages* section relating to the 2003 Funding Package.

Because this account is the repository for funds from all funding packages, a clear-cut view of the impact of the 2005 Funding Package on this account is less visible. New sources of funds that will be deposited to the account include vehicle weight fees, the $75 fee for motor homes, and increased fees for drivers' licenses and related services.

Like the Transportation Partnership Account, changes to projected sources and uses of funds will be updated on a quarterly basis. The financial plan for this account is displayed on page 24.

Program Management Information

Management Information Systems

Providing up-to-date, accurate, and complete highway construction project reporting isn't easy, especially when working from outdated computer systems that are not capable of transmitting data to each other. Antiquated and unintegrated systems, and the fact that many of these systems are being used for functions that they weren't originally intended to support, affect WSDOT's ability to report manage from and accountability data. Further, considerable employee time is required to cull data from the current systems. This makes the agency's use of the existing systems both cumbersome and expensive.

The Legislature recognized the agency's need to develop better management information systems, and in the 2004 legislative session provided funding to study this issue. In August 2005, WSDOT contracted with Eclipse Solutions, Inc., a consulting firm, to perform the WSDOT Critical Applications Modernization and Integration Strategy Assessment. The result of the study will include an assessment of the current system's ability to support the agency's required business processes, and recommendations for the replacement or readjustment of these systems to more efficiently meet WSDOT's business needs.

Eleven core computer applications are included in the study, which is scheduled for completion in December 2005. The results will be presented to the Office of Financial Management, the Legislative Transportation Committee, and the Information Services Board in December 2005 or January 2006. Based on the outcome of the study, WSDOT will be preparing a budget request to the Legislature to approve an appropriation for the development and implementation of new computer systems.

The project charter for this study is available online at: www.wsdot.wa.gov/consulting/Ads/Misc/Misc/2005SPMWSDOTProjectCharter.pdf.

Core Systems Included in the Assessment Study

Capital Program Management System (CPMS)
Construction Contracts Information System (CCIS)
Contract Administration and Payment System (CAPS)
Estimate and Bid Analysis System (EBASE)
Labor Collection and Distribution System/Payroll (Labor Payroll)
Priority Array Tracking System (PATS)
Project Delivery Information System (PDIS)
Project Summary (ProSum)
Transportation Information Planning and Support System (TRIPS)
Transportation Reporting and Accounting Information System (TRAINS)
Work Order Authorization System (WOA)

Program Management Information

Use of Consultants

The start of the 2005-07 biennium saw a continuation of consultant utilization trends from the last quarter of the 2003-05 biennium. From July 1, 2005 to September 30, 2005, the net total of new consultant authorizations was $40,096,385 for Nickel projects, consisting of on-call and project specific consultants. The bulk of new authorizations was directed towards a few specific projects (see the table on page 30).

On-Call Task Order Consultant Agreements
On a bi-annual basis, WSDOT assesses the types of work services that the agency consistently uses. Based on that need, the agency will advertise for predetermined categories of work and will initiate multiple On-Call Task Order agreements for each category. As the regions determine the need for a consultant, they will determine if the work can be completed using one of these On-Call Task Order agreements. Examples of on-call consultant work include preliminary engineering, traffic engineering, real estate appraisal and negotiation, land surveying, traffic engineering, and transportation studies.

Twenty-nine Nickel projects received consultant authorizations from On-Call Task Order agreements during the period of July 1, 2005 to September 30, 2005. Total authorizations were $6,566,827, provided to 41 prime consultant firms and 18 sub-consultant firms. The On-Call consultant authorizations for non-Nickel funds for the same period were $18,012,742. Portions of the non-Nickel funds dollar amount may include funds committed by funding partners.

Project Specific Agreements/Supplements
Project Specific Agreements are individually advertised by project, typically for work that cannot be performed using one of the On-Call agreements described above. First quarter 2005-07 biennium new authorizations for Project Specific Nickel agreements and/or supplements were $33,529,558. Eleven different prime consultants and 25 sub-consultants received authorizations from project specific agreements. All non-Nickel project specific consultant authorizations totaled $2,562,978. Portions of the non-Nickel funds dollar amount may include funds committed by funding partners.

Preparation for the Future
Several work authorizations which utilize On-Call Task Order consultant agreements have been delayed due to the current hold on 2005 Transportation Funding Package work pending the results of Initiative 912.

Program Management Information

Significant On-Call Consultant Authorizations, Jul-Sept 05

Thousands of Dollars

Project	Consultant	Total $	Type of Work Authorized	Auth. Type
I-90, Two-Way Transit & HOV	DKS Associates	$834	Detailed analysis of I-90 center and outside roadway operations across Lake Washington.	New[1]
SR 9, Schloman Road to 256th Street E.	Parametrix, Inc.	$608	Complete the design and Plans, Specifications & Estimate (PSE) elements for the project.	Amend.[2]
SR 520, Design Level Mapping	David Evans & Associates	$718	Mapping I-5 and Lakeview/Ship Canal Bridge	Amend.[2]
I-405, Bellevue Nickel Stream Mitigation	Jones & Stokes, Inc.	$214	Development of conceptual, draft and final stream mitigation plans.	New[1]

Significant Authorizations for Project Specific Consultants, Jul-Sept 05

Millions of Dollars

Project	Consultant	Total $	No. of Subs	Amt for Subs	Type of Work Authorized	Auth. Type
I-405, Congestion Relief and Bus Rapid Transit	HNTB Corp.	$22.9	9	$8.8	Advancement of I-405 corridor design.	Suppl.[3]
SR 522, Snohomish River to US 2	Parametrix	$1.1	4	$0.3	Preparation of environmental documentation and design of two new lanes.	Suppl.[3]
SR 539/I-5 Access and Improvements: Ten Mile Rd to International Boundary	KPFF Consulting Engineers	$2.3	4	$0.3	Preparation of Plans, Specifications & Estimate (PSE) package for the project.	Suppl.[3]
SR 520, Bridge Replacement & HOV	Parametrix	$7	6	$3.5	Completion of draft Environmental Impact Statement (EIS).	Suppl.[3]

[1] "New" authorizations represent task orders awarded to the listed consultant.

[2] "Amended" Task Order authorizations represent additional work by the listed consultant. In the cases listed above, the task order began in a prior period.

[3] "Supplements" represent additional scope, time and budget relative to the consultant efforts for project specific agreements listed above.

Program Management Information

Environmental Documentation, Review, Permitting, and Compliance

Compliance with the Endangered Species Act

2005-07 Biennium Construction Season

WSDOT has started the ESA consultation process on seven of the 37 Nickel projects that have not yet gone to advertisement in the first quarter of the 2005-07 biennium. Two of the projects are currently under review at the Services[1] (*SR 20/Quiet Cove Road Vic. to SR 20 Spur*, and *SR 4 Svensen's Curve – Realignment*). *SR 4 Svensen's Curve – Realignment* is reinitiating[2] consultation due to the recent ESA listing of SW Columbia River Coho salmon as a threatened species. A total of 18 of the 37 projects have completed the consultation process.

ESA Compliance Status for 37 Projects

2005-2007 Biennium Construction:	**Number of Projects**
Projects under review at the Services[1]	2
Biological Assessment underway	5
Local Project - ESA processing by local government	0
Projects which lack sufficient information to start the Biological Assessment[3]	12
Endangered Species Act review complete	18

Projects with Consultation Completed:

SR 516, 208th and 209th Ave SE
SR 9 Schloman Rod. Vic-256th St. E Vic
SR 9/108th Street NE – Lauck Road
I-90 Moses Lake Area – Bridge Clearance
SR 522, UWBCC Campus Access
SR 99/S. 284th to S.272nd St – HOV
I-5/SR 502 Interchange
I-5/SR 532 Northbound Interchange Ramps
I-90/Seattle to Mercer Island
I-90/Eastbound Ramps to SR 18 Signal
SR 167/NB Ramps to Ellingson Road Signal and Ramp Install
I-205 Mill Plain Exit (112th Connector)
SR 20/Ducken Road to Rosario Road
SR 20/Fredonia to I-5 – Widening
SR 270/Pullman to Idaho State Line
SR 202/Preston-Fall City Road & SR 203
SR 543/I-5 to International boundary
I-5/Rush Road to 13th Street – Add additional Lanes

[1] The Services are U.S. Fish and Wildlife and the National Oceanographic and Atmospheric Administration and Fisheries.

Post 2005-07 Biennium Construction Season

Work is beginning on the 30 Nickel projects which are scheduled to be constructed after the 2005-07 biennium. Some of these projects have already completed the consultation process, while others are just beginning.

2007 and Beyond Compliance Status for 30 Projects

	Number of Projects
Projects under review at the Services[1]	0
Biological Assessment underway	3
Local Project- ESA processing by local government	0
Projects which lack sufficient information to start the Biological Assessment[3]	25
Endangered Species Act review complete	2

Projects with the Biological Assessment Underway

U.S. 12 Attalia Vic to US 730
I-5/Port of Tacoma Rd to King Co Line – HOV
I-5/NE 134th St Interchange (I-5/I-205) – rebuild

Projects with Consultation Completed:

SR 704/Crossbase Highway – New Alignment
SR 16 Burley Olalla Intersection

Ferry and Rail Projects

As with the highway projects, documentation for ESA compliance is also submitted for ferry and rail projects. Two ferry projects are scheduled to go to ad in the 2005-07 biennium. WSDOT is completing biological asessments for the Anacortes Terminal Building and the Mukilteo Multi-Modal Ferry terminal and will submit them to the Services[1] in November or December of 2005.

WSDOT also collaborates with the BNSF Railway Company on projects that support faster, more frequent Amtrak *Cascades* intercity passenger rail service. This collaboration includes any associated environmental work. Amtrak *Cascades* projects are constructed on property that is owned,

[2] Reinitation on projects occurs when a new species or critical habitat is listed under ESA. The purpose of the reinitiation is to consult on the effects of the project on the newly listed species or habitat. This must occur because there is no grandfathering under ESA, and concurrence cannot be granted for species which have not been listed yet. Thus projects must be aware of changes in ESA species and habitat listings until construction of the project is complete.

[3] This can mean that either WSDOT has not yet sufficiently studied the area where the project will be taking place, or that there has been a request for further information at the federal level.

operated, and maintained by BNSF. Based on the terms of the Master Corridor Development Agreement between WSDOT and BNSF, any environmental work, including ESA consultation, can be led by either party. The lead party is determined on a case-by-case basis. To date, WSDOT has taken the lead on larger projects from downtown Seattle south, while BNSF has taken the lead on several smaller projects north of Seattle.

Some ESA Consultation Minimization Measures Meet with Mixed Results

In WSDOT's experience, the ESA consultation process does not result in direct mitigation for impacts, but rather results in steps being required to minimize impacts. All projects with a federal component (such as federal permits or federal funding) are required to minimize their impacts to listed species. Some concerns have arisen over the effectiveness of some measures being used to lessen impacts to endangered species.

An example is a bubble curtain used during impact pile driving. Using air compressors and metal frames, workers create an underwater ring of bubbles around a bridge pile to alter sound pressure waves and thereby achieve a lower level of fish mortality and minimizing impacts. The goal is to protect threatened and endangered fish species, the Puget Sound Chinook and the Hood Canal Summer run Chum. Some projects have experienced increased cost and installation time per pile from the bubble curtain requirement. Other projects reported no demonstrable results that the bubble curtain installations altered the sound pressure waves.

Without further research, the effectiveness of such measures remains unproven. Curently, the only information being gathered is the monitoring that may occur when the agency applies a measure to a project, but this does not provide the rigorous research needed to evaluate the effectiveness of this requirement.

A New Wrinkle in Environmental Consultation

NOAA recently added a new step to its document review process. This step involves a review by legal counsel in the Portland office to ensure that all concurrence letters and Biological Opinions are legally sufficient. This review adds an additional two to 14 days to the normal 33-day review time for the informal consultations, and the 138-day formal review time.

Sixty to 70% of the time spent on ESA consultation is now being spent on informal consultations on projects that are determined to result in negligible effects to listed species. The legal requirement to consult on projects that have minimal effects could be met through the use of Programmatic Biological Assessments. While such programmatic agreements have been encouraged by both the Federal Highways Administration and the Services[1], they have proven difficult to complete and maintain because frequent updating is required to account for added list species and areas of newly listed designated critical habitat.

Talent Decision Implementation Update

In early 2004, the U.S. Army Corps of Engineers Seattle District (the COE) began regulating roadside ditches under Section 404 of the Clean Water Act. This regulatory change resulted from a Federal Ninth Circuit Court ruling referred to as the "*Talent* Decision." The case addressed whether the EPA had the authority to regulate the application of herbicides in manmade waterbodies such as irrigation canals. The court's ruling resulted in the COE requiring new and highly detailed information on all roadside ditches.

Under the COE's initial interpretation of the *Talent* Decision, WSDOT was directed to require staff to walk the entire length of each ditch within a project area and provide documentation on each ditch. This additional information was required for permit applications, and took an extra 20 to 200 hours of staff time per project. Despite this, no further environmental mitigation work was required, and the extensive documentation seemed to produce no added environmental benefits.

U.S. Army Corps of Engineers Policy Change

In August 2005, WSDOT submitted a Section 404 permit application for the *SR 509/I-5 Freight and Congestion Relief Project*. In the application, WSDOT staff took a new approach by limiting jurisdictional ditch areas to those with "an observable surface water connection to traditional waters of the U.S." In plain English: WSDOT looks for indications that water from a ditch flows into a natural waterbody. This methodology is anticipated to provide a 70% reduction in the time needed to assess ditches for Section 404 permitting because it avoids time spent on ditches not connected to natural waterbodies.

After concluding a field review of the project in October, COE staff indicated they would recommend approval of this new jurisdictional approach for roadside ditches. Final confirmation is expected from the COE before the end of the year. Upon approval by the COE, WSDOT will provide more detailed guidance on its *Talent* internet site, www.wsdot.wa.gov/environment/Talent/default.htm.

Program Management Information

Construction Safety Information

This section of the *Beige Pages* tracks the job site safety record on the 2003 Transportation Funding Package projects. All recordable injuries are recorded for both WSDOT personnel and the contractors engaged by WSDOT to perform construction work. This information is combined into a single number indicating the total number of recordable injuries per project per quarter. A recordable injury is any work related illness or injury that results in death, loss of consciousness, days away from work, days of restricted work, or medical treatment beyond first aid.

These signs, from a SR 16 worksite in Pierce County, will help create a safe environment for drivers and workers during construction.

Number of Recordable Injuries

Project and Project Team: Contractor and WSDOT Project Engineer	April - June 2005	July - Sept. 2005
I-5/Salmon Creek to I-205 (Hamilton Construction and Casey Liles, P.E.)	1	0
I-90/Argonne Rd to Sullivan Rd. (Scarsella Bros Inc. and Darrel McCallum, P.E.)	0	0
SR 527, 132nd St. SE to 112th St. SE (KLB Construction Inc. and Marlin Lenssen, P.E.)	0	0
U.S. 395, NSC - Farwell Road Lowering (Max J. Kuney Co. and Robert Hilmes, P.E.)	1	0
SR 161/234th St. to 204th St. E (Scarsella Bros. Inc. and Howard Diep, P.E.)	0	0
SR 203, NE 124th/Novelty Rd. Vic. Roundabout (Wilder Construction Co. and Brian Dobbins, P.E.)	0	0
I-5/Federal Way-S 317th St. HOV (Icon Materials and John Chi, P.E.)	0	1
I-5, 2nd St. Bridge Replacement (Mowat Construction Co. and Dave Crisman, P.E.)	0	4
SR 18, Covington Way to Maple Valley (Terra Dynamics Inc. and Derek Case, P.E.)	no work	0
SR 18/Maple Valley to Issaquah/Hobart Rd. (Guy F. Atkinson LLC and Derek Case, P.E.)	1	1
SR 31, Metaline Falls to the International Border (M.A. Deatley Construction and Robert Hilmes, P.E.)	0	0
SR 161, Jovita Blvd. to S 360th St. (Tri-State Construction and Messay Shiferaw, P.E.)	0	0
U.S. 12, SR 124 to McNary Pool (Steelman-Duff, Inc. and Will Smith, P.E.)	1	0
I-5, NE 175th St. to NE 205th St. (Pacific Road and Bridge and Amir Ahmadi, P.E.)	1	0
SR 161, 204th St. to 176th St. E (Scarsella Brothers and Howard Diep, P.E.)	0	0
SR 16, 36th St. to Olympic Drive NW (Woodworth & Company and Dave Ziegler, P.E.)	0	0
I-5, Roanoke Vicinity Noise Wall (Mowat Construction Co. and Stanley Eng, P.E.)	no work	2
I-5, Roanoke Vicinity Noise Wall - Stage 2 (Wilder Construction Co. and Stanley Eng, P.E.)	no work	0
SR 16 / Union Avenue to Jackson - HOV (Tri-State Construction and Dave Ziegler, P.E.)	0	0
U.S. 395, NSC - Gerlach to Windermere (KLB Construction and Robert Hilmes, P.E.)	0	0
I-5, Pierce Co. Line to Tukwila HOV - Stage 4 (Icon Materials and Stanley Eng, P.E.)	0	0
SR 240, I-182 to Columbia Center (Icon Materials and Moe Davari, P.E.)	0	0
SR 24, I-82 to Keys Road (Max J. Kuney Company and Paul Gonseth, P.E.)	0	0
SR 106, Skobob Creek Fish Passage (Quigg Bros., Inc. and John McNutt, P.E.)	0	1
SR 99, G. Washington Memorial - Aurora Ave. Bridge (Mowat Construction Co. and John Chi, P.E.)	no work	1
U.S. 12, Jantz Road - Construct Frontage Rd. (Inland Asphalt Co. and Will Smith, P.E.)	1	0
I-405 Totem Lake/NE 128th St. HOV Direct Access/Freeway Station (Max J. Kuney and Doug Haight, P.E.)	no work	3
I-5/48TH to Pacific Avenue - Core HOV (Kiewit Pacific Co. and Howard Diep, P.E.)	no work	0
I-5/SR 526 to Marine View Drive (Atkinson-CH2M Hill A Joint Venture and Roland Benito, P.E.)	no work	0
SR 9 - SR 522 to 212th St SE Widening (Wilder Construction Co. and Dawn McIntosh, P.E.)	no work	2
TOTAL[1]	6	15

[1]The number listed above are reported voluntarily by construction contractors. Contractors are not required to describe the incident nature and severity or follow up actions. WSDOT cannot currently offer a more detailed anlysis of construction site injury trends.

Program Management Information

Construction Employment Information

How Many Construction Workers Work on Active 2003 Transportation Funding Package Projects?

WSDOT has asked construction contractors working on the 2003 Transportation Funding Package projects to provide WSDOT with a "snapshot" estimate of the "average" direct jobsite employment on each Nickel job over the course of the quarter. The following table shows the prime contractors' responses for their work and their on-site subcontractors on the projects that have gone to construction.

Donald Matthews records survey data at SR 16 over Snake Lake in Tacoma.

Average Number of Workers Employed by Prime and Subcontractors

For Active Nickel Projects: Project/Contractor	Apr - Jun 2005	July - Sept 2005
I-5/Salmon Creek to I-205 (Hamilton Construction and its 61 Subcontractors)	33	48
I-90/Argonne Rd. to Sullivan Rd. (Scarsella Bros. and its 29 Subcontractors)	43	37
SR 527, 132nd St. SE to 112th St. SE (KLB Construction and its 39 Subcontractors)	29	33
U.S. 395, NSC - Farwell Road Lowering (Max J. Kuney and its 16 Subcontractors)	18	1
SR 161/234th St E to 204th St. E (Scarsella Bros. and its 21 Subcontractors)	12	11
SR 203, NE 124th/Novelty Rd. Vic. Roundabout (Wilder Construction and its 26 Subcontractors)	1	2
I-5/Federal Way - S 317th St. HOV (Icon Materials and its 40 Subcontractors)	47	29
I-5, 2nd St. Bridge Replacement (Mowat Construction and its 29 Subcontractors)	25	26
SR 18, Covington Way to Maple Valley (Terra Dynamics and its 3 Subcontractors)	No work	6
SR 18/Maple Valley to Issaquah/Hobart Rd. (Guy F. Atkinson and its 37 Subcontractors)	55	39
SR 31, Metaline Falls to International Border (M.A. Deatley Construction and its 16 Subcontractors)	22	34
SR 161, Jovita Blvd. to S 360th St. (Tri-State Construction and its 23 Subcontractors)	36	54
U.S. 12, SR 124 to McNary Pool (Steelman-Duff, Inc and its 13 Subcontractors)	17	14
I-5, NE 175th St. to NE 205th St. (Pacific Road and Bridge and its 17 Subcontractors)	13	16
SR 161, 204th St. E to 176th St. E (Scarsella Brothers and its 12 Subcontractors)	21	30
SR 16, 36th St. to Olympic Drive NW (Woodworth & Company and its 10 Subcontractors)	20	10
I-5, Roanoke Vicinity Noise Wall (Mowat Construction and its 6 Subcontractors)	No work	2
I-5, Roanoke Vicinity Noise Wall - Stage 2 (Wilder Construction Co. and its 9 Subcontractors)	No work	12
SR 16 / Union Avenue to Jackson - HOV (Tri-State Construction and its 49 Subcontractors)	50	111
U.S. 395, NSC - Gerlach to Windermere (KLB Construction and its 18 Subcontractors)	14	27
I-5, Pierce Co. Line to Tukwila HOV - Stage 4 (Icon Materials and its 24 Subcontractors)	30	66
SR 240, I-182 to Columbia Center (Icon Materials and its 51 Subcontractors)	31	70
SR 24, I-82 to Keys Road (Max J. Kuney Company and its 31 Subcontractors)	11	41
SR 106, Skobob Creek Fish Passage (Quigg Bros., Inc. and its 10 Subcontractors)	0	7
SR 99, G. Washington Memorial - Aurora Ave. Bridge (Mowat Construction Co. and its 3 Subs)	No work	8
U.S. 12, Jantz Road - Construct Frontage Rd. (Inland Asphalt Co. and its 5 Subcontractors)	5	2
I-405 Totem Lake/NE 128th St. HOV Direct Access/Freeway Station (Max J. Kuney and its 30 Subs)	No work	52
I-5/48TH to Pacific Avenue - Core HOV (Kiewit Pacific Co. and its 36 Subcontractors)	No work	8
I-5/SR 526 to Marine View Drive (Atkinson-CH2M Hill A Joint Venture and its 16 Subcontractors)	No work	96
SR 9 - SR 522 to 212th St SE Widening (Wilder Construction Co. and its 12 Subcontractors)	No work	2
TOTAL	533	894

Worker Safety: Quarterly Update

Recordable Injuries for WSDOT Workers

Highway Maintenance Workers

This quarter accounted for a 7.6 injury rate. Twenty-six recordable injuries were reported. There were a total of 355 lost workdays associated with the 26 injuries. Thirteen of the 26 injuries accounted for five or fewer lost workdays. Sprains/strains accounted for 57% of maintenance worker injuries. The most frequently injured part of the body was the back (38%). Sixty percent of those back injuries were specifically to the lower back resulting in 130 lost workdays.

Highway Engineering Workers

Accounting for a 2.5 injury rate – the fourth highest injury rate in 3.5 years – there were 14 recordable injuries reported for engineering personnel resulting in 36 lost workdays. Eight of the injuries reported this quarter occurred in previous quarters. Twelve of the 14 injuries accounted for five or fewer lost workdays. Fifty percent of engineering injuries were occupational illnesses, e.g., hearing loss or disorders associated with repeated trauma. There are no lost workdays associated with these occupational illnesses. Sprains/strains accounted for 21% of engineering injuries resulting in 13 lost workdays.

Ferry Vessel Workers

Twenty-three recordable injuries were reported for ferry vessel workers this quarter with an injury/accident rate of 9.3. These injuries accounted for 377 lost workdays. Back injuries accounted for 17.6% of those injuries and 24% of lost workdays reported. Sprains/strains for 65.2% of recordable injuries reported this quarter.

Number of Injuries by Type

The graph to the right entitled "Number of Work Injuries by Type" shows injuries by type for WSDOT maintenance, highway engineer, and ferry workers:

For all WSDOT employees including WSF, there were a total of 66 recordable injuries. Sprains/strains accounted for 53.8% of those injuries.

- Maintenance workers incurred 39.3% of all WSDOT injuries in this quarter.
- Highway engineering workers accounted for 21.2% of all injuries.
- WSDOT ferry vessel workers accounted for 34.8% of all injuries.
- Administrative employees accounted for 4.5% of all injuries.

Highway Maintenance Workers

Recordable Injuries[1] per 100 Workers per Calendar Year

	2002	2003	2004	2005
Qtr 1	4.5	7.2	10.5	5.6
Qtr 2	7.5	6.5	7.4	9.0
Qtr 3	8.1	8.4	7.1	7.6
Qtr 4	7.0	6.2	9.6	-
Annual Total	27.1	28.3	34.6	22.2
Qtrly. Average	**6.8**	**7.1**	**8.6**	**7.4**

Benchmark = 8.2

Highway Engineering Workers

Recordable Injuries[1] per 100 Workers per Calendar Year

	2002	2003	2004	2005
Qtr 1	1.7	1.4	1.3	2.1
Qtr 2	3.5	1.3	1.4	0.4
Qtr 3	3.4	1.5	0.9	2.5
Qtr 4	2.1	1.6	2.8	-
Annual Total	10.7	5.8	6.4	5.0
Qtrly. Average	**2.7**	**1.5**	**1.6**	**1.7**

Benchmark = 1.7

Ferry Vessel Workers

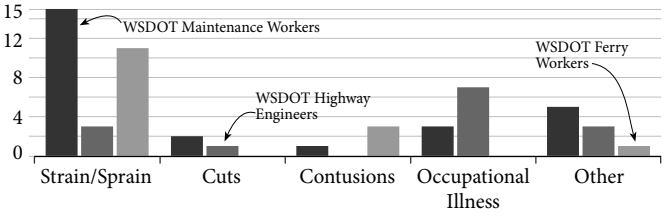
Recordable Injuries[1] per 100 Workers per Calendar Year

	2002	2003	2004	2005
Qtr 1	12.0	14.2	7.9	11.7
Qtr 2	8.9	11.2	12.1	12.1
Qtr 3	8.9	9.4	16.1	9.3
Qtr 4	6.9	9.8	12.0	-
Annual Total	36.7	44.6	48.1	33.1
Qtrly. Average	**9.2**	**11.2**	**12.0**	**11.0**

Benchmark = 7

Number of Work Injuries by Type

July Through September 2005



[1] "Recordable injuries and illnesses" is a standard measure that includes all related deaths and work related illnesses and injuries which result in death, loss of consciousness, days away from work, days of restricted work or medical treatment beyond first aid. The U.S. Bureau of Labor Statistics provides the selected 2000 national average benchmarks. One worker equals 2,000 hours per year.

Worker Safety: Quarterly Update

Prevention Activities

Steep Slope/Mountaineering Training

The North Central Region (NCR) survey crew had work to perform on the steep and hazardous slopes of the Rock Island Slope Stabilization project. Survey crew members were faced with surveying and placing stakes on a slope above a 310 foot cliff. The work required special training.

Argus Pacific, Inc. (consultants) provided training for 13 WSDOT employees, ten from the North Central Region (NCR) and three from the Northwest Region. Training consisted of basic fall protection; equipment and technique fundamentals peculiar to steep slopes; and hands-on practical training on a carefully selected mountain slope outside of Wenatchee.

Crew members received new equipment as well as training. Crews safely performed the challenging task of drilling on an unstable slope far above the highway. The newly acquired knowledge and equipment also found use on the Snoqualmie rockslide site. Early Sunday morning, September 11, 2005, three people were killed when their vehicle was caught in a rock slide on westbound I-90, several miles west of the Snoqualmie Pass summit. In the late afternoon of the next day, a rock slab estimated to weigh ten tons broke loose, skidded down and bounced onto the shoulder of I-90 in the same vicinity. Fortunately, no accidents or injuries resulted from this second event.

The South Central Region (SCR) asked NCR for assistance in inspecting slopes. NCR crew members were able to use their new skills to quickly and safely inspect the slopes.

Drilling on an unstable slope 310 feet above the highway is not work for the faint of heart.

Hydraulic hammer knocks down large rocks from the slope

Prevention Activities for Ferry Vessel Workers

The Washington State Ferry System conducted the first annual round of Safety Management System (SMS) internal audits of all operating vessels, terminals and the Eagle Harbor Repair Facility between July and October 2005. A total of 41 individual audits took place, prompted by the new federal security regulations for security plan audits. Over and beyond the security plan audits, WSDOT reviewed key safety, security, environmental protection, and emergency management processes, equipment and procedures. Examples of safety issues and their solutions are presented below:

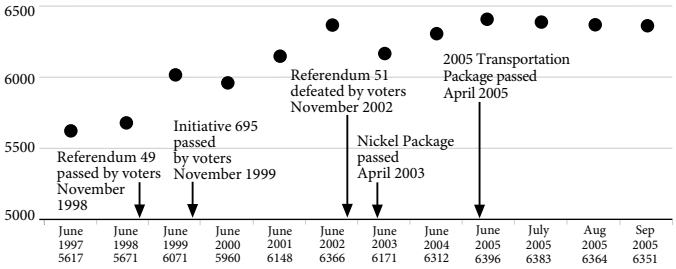
Safety Issues Found	Solutions Identified
1) CO and diesel fumes on ferry car deck	-> *Testing and monitoring to validate and identify necessary changes*
2) Old buffing machines may have resulted in costly injuries	-> *Purchased new and lighter buffers for the fleet and provided training.*
3) Portable eyewash units did not meet WAC requirements	-> *Purchased "plumbed-in" eyewash stations that meet WAC requirements for the vessels*
4) Back and shoulder strains and sprains experienced during mooring operations	-> *Provided new lightweight mooring lines of equal or greater strength.*
5) Pinch, strain and sprain injuries experienced during use of old chain straps	-> *Purchased nylon straps to eliminate pinch points and reduce weight of towing straps.*

Workforce and Training: Quarterly Update

WSDOT Workforce Levels Statistics

One indicator of the agency's workforce size is the current number of permanent full-time employees on staff. The chart to the right shows that number at various points since the end of 1997. (The number of "FTE's" [full-time equivalents] will generally exceed the number of full-time employees, since seasonal and part-time work force must also be funded from "FTE" allotments.) WSDOT's workforce size experienced a slight decrease from last quarter. During the third quarter of 2005, there were minor decreases in all categories of workers, four in Clerical and Staff Services; 10 in Engineering (through attrition); nine in Maintenance; 11 in Administration and 11 in Washington State Ferries.

Number of Permanent Full-Time Employees at WSDOT



Source: WSDOT Office of Human Resources

Statutorily Required Training for Maintenance Workers: July - September 2005

WSDOT's goal is to reach 90% compliance for statutorily required maintenance employee training through delivering training during off-season periods when work crews are available.

Safety Courses	Workers Requiring Training	Basic Training Completed to Date	Completed Basic Training Reporting Quarter	Workers Needing Basic Training	Completed Refresher Training Reporting Quarter	Workers Needing Refresher Training	Total in Compliance	% in Compliance	% Change from Previous Quarter
Blood Borne Pathogens	576	494	6	82	12	261	233	40%	-7%
First Aid	1459	1358	2	101	8	156	1202	82%	-2%
Hearing Conservation	1315	1258	4	57	16	243	1015	77%	-10%
Personal Protective Equipment	1348	1116	24	232	0	0	1116	83%	+1%
Fall Protection	775	625	0	150	0	0	625	81%	+1%
Flagging & Traffic Control	1120	1094	2	26	4	102	992	89%	-1%
Maintenance Courses									
Drug Free Workplace	325	280	61	45	0	0	280	86%	+3%
Forklift	1128	1010	15	118	0	0	1010	90%	+1%
Hazardous Materials Awareness	1009	838	40	171	163	191	647	64%	+13%
Aerial Lift	306	231	37	75	0	0	231	75%	+12%
Bucket Truck	411	325	44	86	0	0	325	79%	+2%
Excavation, Trenching & Shoring	394	284	0	110	0	0	284	72%	-1%

Required Training for all WSDOT Workers: July - September 2005

Training Courses	Workers Requiring Training	Basic Training Completed to Date	Workers Needing Basic Training	Workers Needing Refresher Training	Completed Training Reporting Quarter	Total in Compliance	% in Compliance	% Change from Previous Quarter
Disability Awareness	7409	1797	5612	0	26	1797	24%	+1%
Ethical Standards	7409	7131	299	762	157	6369	86%	+2%
Security Awareness - all employees	7409	5450	2055	0	1	5450	73%	+2%
Sexual Harassment Discrimination	7409	4292	3117	0	105	4292	58%	+2%
Valuing Diversity	7409	2537	4872	0	23	2537	34%	0%
Violence that Affects the Workplace	7409	5764	1645	0	3	5764	78%	+1%

Source: WSDOT, Office of Human Resources, Staff Development

NOTE: OEO training was revised into three courses (Disability Awareness, Sexual Harassment/Discrimination, and Valuing Diversity) in June 2002, and only these revised courses are currently reported. Refresher interval for the revised OEO training is five years.

Highway Construction Program: Quarterly Update

2003-2005 Biennium Closeout Update: Cash Flow on Pre-Existing Funds Projects

The June 30, 2005 edition of the *Gray Notebook* reported that the total 2003-05 biennium expenditures would not be known until after all final payments were processed in July 2005. After processing all of the final payments, the total Pre-Existing Funds expenditures for the 2003-05 biennium was $1,012 million, or 92% of the original $1,101 million expenditure plan.

Highway Construction Planned vs. Actual Expenditures by Biennium

Biennium	Percent Variance		
	Improvement	Preservation	Total
1999-2001	3%	1%	4%
2001-2003	2%	2%	4%
2003-2005	3%	5%	8%

The 8% variance as of the end of the 2003-05 biennium for the Highway Construction Program Pre-Existing Funds was divided between the Preservation and Improvement programs. The Preservation program was under plan by $53.8 million, or approximately 5%. Delays on the Hood Canal Bridge project caused this variance. (See the June 30, 2005 *Gray Notebook* for more information.) The Improvement program was under plan by approximately $35.3 million or approximately 3%. (See the June 30, 2005 *Gray Notebook* for the list of projects that lagged in planned expenditures.)

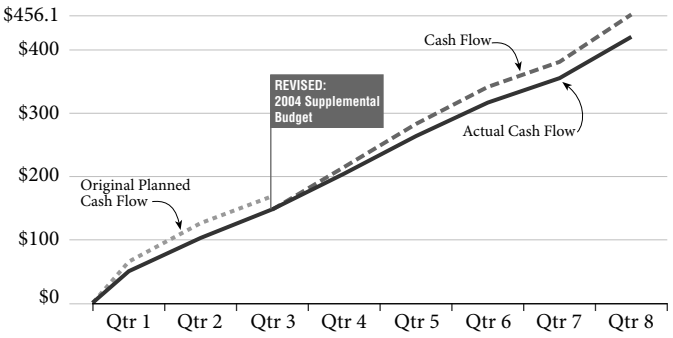
Improvement Program Cash Flow

Pre-Existing Funds

Planned vs. Actual Expenditures

2003-2005 Biennium, Quarter 8 ending June 30, 2005

Dollars in Millions



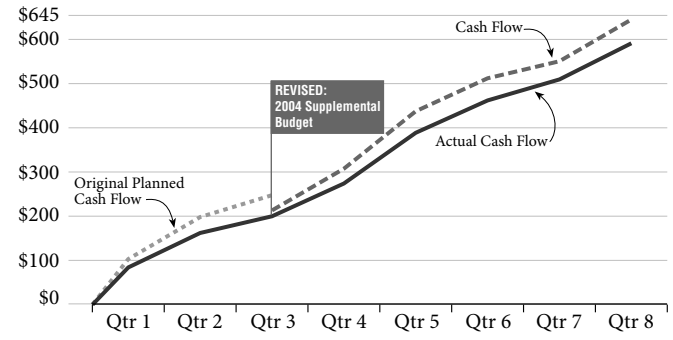
Preservation Program Cash Flow

Pre-Existing Funds

Planned vs. Actual Expenditures

2003-2005 Biennium, Quarter 8 ending June 30, 2005

Dollars in Millions



Highway Construction Program: Quarterly Update

Meeting WSDOT's Scheduled Advertisement Dates

Project Advertisements - Biennium To Date

The Highway Construction Program is the largest capital program in the Transportation Budget. Planned expenditures for the 2005-07 biennium are approximately $3.1 billion. Overall delivery of the Highway Construction Program is tracked against a schedule for advertisement dates and against projected cash flow for construction progress. Starting with the December 2005 edition of the *Gray Notebook*, WSDOT will also track two additional Pre-Existing Funds project milestones: Begin Engineering Phase and Operationally Complete. (See pages 4-5 in the Beige Pages for Nickel project milestones.)

Funding for the 2005-07 Highway Construction Program includes a variety of fund sources, including Pre-Existing Funds ($1.1 billion), 2003 Transportation Funding Package "Nickel" funds ($1.2 billion), 2005 Transportation Partnership Funding package ($659 million), and Tacoma Narrows Bridge funds ($148 million). The program includes a commitment to advertise 435 contracts during the current biennium, of which 40 are Nickel projects, 330 are funded with Pre-Existing Funds, and 65 are funded with Transportation Partnership Funds. For detailed information on Nickel and Transportation Partnership funded projects, see pages 6-19 in the Beige Pages.

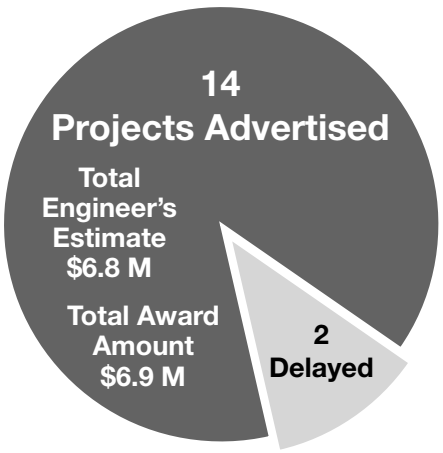
To Date: Pre-Existing Funds Projects

Pre-Existing Funds project advertisements through the quarter ending September 30, 2005, were 11 of the planned 15, or 73% of the "planned" projects for the quarter. Of the 15 planned advertisements for the first quarter, 10 were advertised as scheduled, one was advertised early (advertised towards the end of last biennium), two were delayed to later in the biennium, and two planned projects were transferred to local agencies to advertise and administer. Additionally, three projects scheduled for advertisement in later quarters of this biennium were advertised early in the first quarter. Therefore, a total of 14 projects were advertised during the first quarter of this biennium.

The table below summarizes the delivery status of Pre-Existing Funds projects advertised during the first quarter of the 2005-07 biennium. This summary includes the safety improvement projects discussed on page 42 and project delivery accomplishments within this quarter.

Pre-Existing Funds Projects: A Snapshot of Quarterly Progress and Total Biennial Progress to Date

End of This Quarter
September 30, 2005

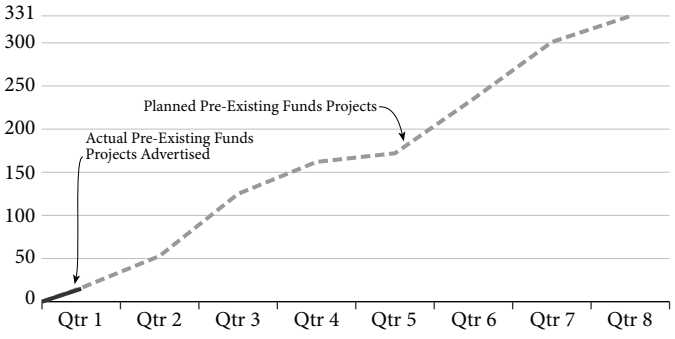


Projects Advertised	This Quarter's Progress	Biennium to Date Total
As Scheduled	10	10
Project Ads Early	4	4
Project Ads Late	0	0
Emergency Projects	0	0
Total Advertised	**14**	**14**
Projects Delayed		
Within in the Biennium (delayed)	2	2
Out of the Biennium (deferred)	0	0
Total Delayed	**2**	**2**
Projects Deleted		
Projects Deleted	0	0
Total Deleted	**0**	**0**

Highway Construction Program: Quarterly Update

Meeting WSDOT's Scheduled Advertisement Dates

Highway Construction Program Advertisements
Pre-Existing Funds Projects
Planned vs. Actual Number of Projects Advertised
2005-2007 Biennium, Quarter 1 ending September 30, 2005
Project Count



Source for all graphs: WSDOT Project Control and Reporting Office

One Pre-Existing Funds project scheduled for the second quarter was advertised early in the first quarter (see page 42 for Safety projects):

SR281/Quincy South – Paving

Seven Pre-Existing Funds projects were scheduled and advertised during the first quarter (see page 42 for Safety projects):

SR 529/Snohomish River Bridges 529/10 E&W

SR 20/Deception Pass State Park Vicinity-Rock Work

NC Regionwide Bridge Scour

U.S. 12/Touchet River Bridge at Waitsburg

U.S. 2/Snohomish River & Ebey Slough Bridge WB - Seismic

I-5/Everett Vicinity Bridges - Seismic

SR 526/Vicinity Evergreen Way Pedestrian Bridge

Two Pre-Existing Funds projects were deferred within the biennium during the first quarter:

I-5/Chehalis Western Trail Pedestrian Bridge - New Structure

This advertisement is being delayed six months from September 2005 to March 2006 in order to resolve right of way acquisition issues and redesign the project. The project was originally designed with the assumption that the City of Lacey would obtain a permanent easement in the old Chehalis Western Trail right of way. However, the City only obtained a temporary easement. This required WSDOT to purchase permanent right of way and easements on the south side of I-5 for this project, which was not anticipated in the original project right of way estimates or design. This delay will not affect the planned Operationally Complete date.

I-90 Ryegrass EB/WB Safety Rest Area - Water System Rehabilitation

This advertisement is being delayed eight months from July 2005 to March 2006 in order to meet certain redesign requirements. In order to comply with Department of Health and Department of Ecology water quality regulations, WSDOT had to complete a water system evaluation and a small water system management plan. These requirements added additional design elements and review time. This delay will delay the Operationally Complete date one year from 2005 to 2006.

Highway Construction Program: Quarterly Update

Improvement and Preservation Programs

Cash Flow on Pre-Existing Funds Projects

WSDOT submitted an expenditure plan to the Legislature for the first quarter of the biennium totaling approximately $161 million. As of September 30, 2005, actual expenditures totaled $135 million, leaving a variance of approximately $26 million or 16% from the biennium plan.

The 16% variance as of the end of the first quarter for the Highway Construction Program was divided between the Improvement and Preservation programs. The Preservation program planned cash flow was $100 million, and actual expenditures were $91 million. This was under plan by $9 million, contributing to approximately 6% of the current cash flow variance. The Improvement program planned cash flow was $61 million, and actual expenditures were $43 million. This was under plan by approximately $18 million, contributing to about 10% of the variance. The under-spending in the Preservation program was due to the extension of the selection process for Hood Canal Bridge alternate construction sites as a result of archeological discoveries at the originally planned construction site (see December 31, 2004 *Gray Notebook* for more information). Additionally, closure of the bridge has been delayed until next biennium, which has delayed the need to lease a park and ride lot for the west side passenger-only ferry terminal until 2008. The under spending in the Improvement program was primarily due to the extension of advertisement periods for several projects (such as *SR 202/SR 520 to Sahalee Way – Widening* and *SR 7/SR 507 to SR512 – Safety*) and slower than expected expenditures for several others (such as *SR 161/128th to 234th – Safety* and *I-82 to SR 397 Intertie*).

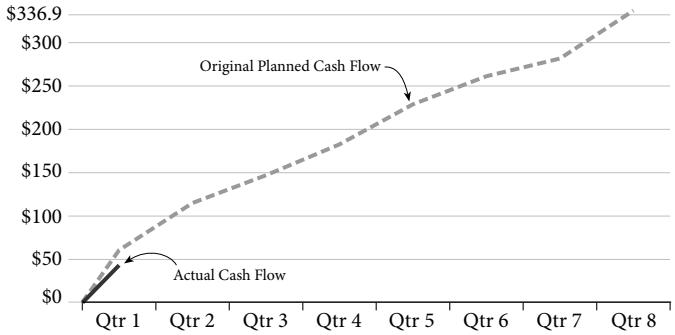
Improvement Program Cash Flow

Pre-Existing Funds

Planned vs. Actual Expenditures

2005-2007 Biennium, Quarter 1 ending September 30, 2005

Dollars in Millions



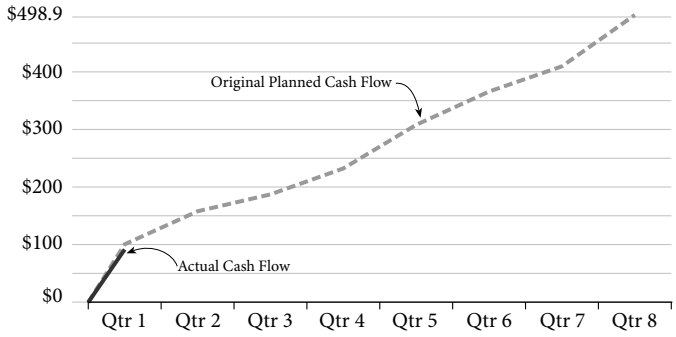
Preservation Program Cash Flow

Pre-Existing Funds

Planned vs. Actual Expenditures

2005-2007 Biennium, Quarter 1 ending September 30, 2005

Dollars in Millions



Highway Construction Program: Quarterly Update

Improvement and Preservation Programs

Pre-Existing Funds for Safety Improvements Program Projects: Quarterly Update

While elements that improve safety are a part of almost every highway construction project, a special program with a sub-category established by the Legislature covers projects designed to address specific issues in "high accident corridors" (HAC) and "high accident locations" (HAL). WSDOT tracks the award of these projects in order to provide a picture of program delivery on issues that are of great importance.

Of the five safety projects scheduled for advertisement in the first quarter, three were advertised on time, one was advertised early in last biennium, and responsibility for the remaining fifth project, *U.S. 101/Peabody Street Intersection – Signal*, was transferred to the City of Port Angeles to advertise and award. Additionally, two safety projects scheduled for advertisement later in this biennium were accelerated and advertised early in the first quarter

Two safety projects scheduled for advertisement in later quarters were accelerated and advertised early in the first quarter:

SR 307/Stottlemeyer Road/Gunderson Road I/S – Signal (Originally scheduled for advertisement in the third quarter)
I-5/Prairie Creek to Maytown – Median Crossover (Originally scheduled for advertisement in the fourth quarter)

One safety project scheduled for advertisement in the first quarter was advertised early before the end of last biennium:

SR 24/Riverside Dr. – I/S Improvements

Three safety projects were scheduled and advertised on time in the first quarter:

Olympic Region Pedestrian Risk 2005-07 – Safety
Olympic Region Accident Reduction
SR 3/Vic Shelton to Vic Belfair – Centerline Rumble Strip

Highway Construction: Quarterly Update

Construction Industry Costs Advertisement Prices

The construction industry across the country has been buzzing with discussion of price run-ups for construction inputs including materials, fuel, equipment, and labor. Adverse trends had been apparent throughout the last year, especially for steel (heavy overseas demand, although a price surge seemed to begin to level off somewhat during mid-2005), cement (supply shortages) and energy (upward trends for fuel for construction equipment and energy inputs into materials).

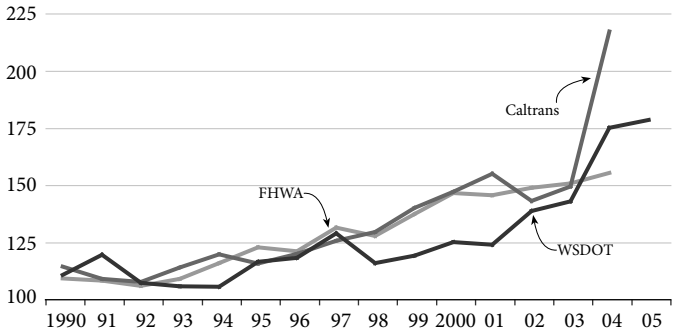
In the aftermath of Hurricane Katrina (and then, to a lesser extent, Wilma), concerns heightened especially at the prospects of still higher energy prices as well as new demand-side pressure on industry resources from Gulf area re-building. The Gulf States situation also raises concerns for shortages of skilled labor and experienced construction engineers and project managers, as well as overall construction industry capacity. Conversations with construction industry experts also touch on potential difficulties for contractors' access to surety bonding. Discussions also address the adverse implications for the true competitiveness of pricing in the industry from the on-going trends toward industry concentration, i.e., fewer and fewer big contractors taking more and more of the overall industry pie.

In recent weeks, news has been spreading among state and local transportation departments of "sticker shock" as bid openings have shown contractors' pricings appreciably above project estimates.

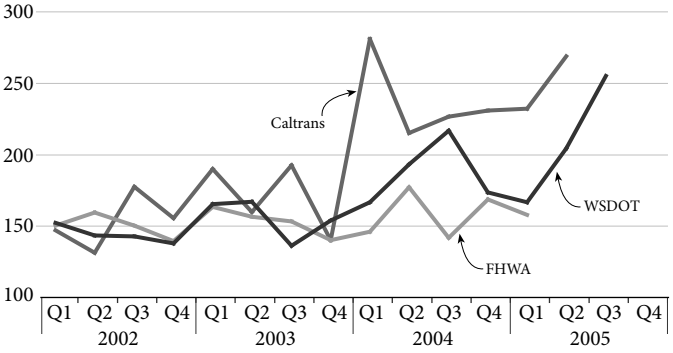
Some of WSDOT's recent bid openings have not been reassuring. For example, WSDOT recently opened bids on *SR 3 – SR 303 Interchange*, and despite the agency's efforts to incorporate the impact of cost escalation into the estimate, WSDOT still missed the low bid by almost 17%. The second and third low bids were in the same general range. WSDOT's estimate was $14.33 million, while the low bid was $16.74 million. WSDOT is currently analyzing the bid tabs to understand the differences, but the initial impression is that the cost of fuel in equipment and trucking, as well as the steel cost in the bridge superstructure and sign structures, are the major areas contributing to this difference.

On a positive note, WSDOT opened bids on *I-5 48th to Pacific* in late June and was pleased to find the low bid to be under the engineer's estimate by 4.7%. This project was awarded to

Annual Construction Cost Index
WSDOT Base 1990 = 110
FHWA and Caltrans Base 1987 = 100



Quarterly Construction Cost Index
WSDOT Base 1990 = 110
FHWA and Caltrans Base 1987 = 100



"Sticker shock" is exactly what the Arizona DOT experienced when it recently opened bids for a project providing improvements at the junction of Red Mountain, Satan Highway, and U.S. 60. The engineer's estimate for this project was $58 million; the low bid came in at $71 million, and the second lowest bid at $84 million.

Highway Construction: Quarterly Update

the low bidder Kiewit Pacific for a contract amount of $72.87 million. The second bidder on this project submitted a price of $78.42 million, which was 2.6% over the engineer's estimate.

WSDOT's experience of a volatile bidding environment is similar to what is happening in other states (see gray box on page 43). One significant difference between Washington and other states is that WSDOT is still seeing strong competition by bidders for its projects. Other states such as Florida, California, and Arizona are reporting a decrease in the number of bidders on large projects. Some states are even experiencing an increase in the occurrence of single-bidder bid openings.

Trailing Indicators

WSDOT prepares its construction cost estimates from the information about market conditions drawn from recent bids, not from a crystal ball of future market conditions. WSDOT accumulates construction cost information into a construction cost index and compares that information against the experience of other states. WSDOT's Construction Cost Index is a composite of unit price information from low bids on seven of the most commonly used construction materials. These items reflect a composite cost for a completed item of work and include the cost of labor, equipment and materials.

The first of the graphs on page 43 shows WSDOT's experience since 1990, plotted against similar types of cost indices maintained by the Federal Highway Administration (FHWA) for the country as a whole and by the California Department of Transportation (CalTrans) for California. The second looks in greater detail at the most recent 15 quarters. FHWA has not yet released data on the two most recent quarters. WSDOT will be including Construction Cost Indices for other states in future editions.

Making information available to the public

This quarter, WSDOT began publishing its materials costs on its website. In line with the agency's "No Surprises" philosophy, details on costs trends are now available to the public with updates occurring at the end of every quarter. To view some of the most recent costs by quarter, see the graphs on page 46. These graphs, as well as costs on an annual basis from 1990 to 2004, are available at www.wsdot.wa.gov/biz/construction/constructioncosts.htm.

Fuel Cost Escalation Pilot Project

WSDOT is currently evaluating the use of an escalation clause on a pilot basis to try to buffer the impacts of fuel escalation to the contractors. This clause would shift the risk of price increases during the life of the contract from the contractor, who includes it in the bid, to the state, which would pay the increased or decreased cost of fuel during the life of the project. This clause does not eliminate the financial impact of escalation to the project, but rather shifts its risk from the contractor to the owner, to fund as it materialized throughout the project.

The Crystal Ball

In the world of markets, everyone knows by heart the disclaimer in the advertisements for mutual funds. "Past results are not a guarantee of future performance." This is precisely the case when looking ahead to national and local construction industry pricing, especially when price volatility seems inevitable from the many trends the industry now faces.

WSDOT's construction cost estimates are necessarily based completely on available trailing indicators and there is neither data nor methodology from which engineers can estimate projects based on crystal ball forecasts of changing future prices. In the Cost Estimate Validation Process (CEVP)™, which WSDOT is applying to large projects, some account is given to baseline future inflation.

For future project costs, WSDOT applies industry standard inflation rates to base estimates in order to project year of construction costs. Recent trends indicate that tables detailing inflation rates were in need of update. The rates used on these tables were evaluated against updated industry forecasts and updated. The changes to the tables include a higher than previously forecasted inflation rate for 2004 and 2005 and an updated forecast for future years. Updating the inflation rates used to forecast future costs attempts to reflect some of the recent price trends.

Recent coverage of construction industry inflation in *The Engineering News Record*, the leading industry periodical, contained the following statements, none of which can be regarded at this time as more than the weathervanes of industry sentiment:

Highway Construction: Quarterly Update

The major uncertainty relates to the price and availability of building materials, which means in the near-term that the construction industry will continue to adjust to a higher cost structure.

A recent pre-Katrina survey of 167 public owners found that 92% of the owners experienced an average increase in their project cost of 13.2% in 2004, says John Dunkerley, chief estimator for PinnacleOne, Phoenix, which commissioned the survey. "Katrina will only aggravate those conditions," he says. "I had expected industry escalation to slip back to 5% this year. But now I'm expecting Katrina to spike it up over the next 12 to 24 months by 10 to 20% a year." (from *The Engineering News Record*, September 26, 2005)

What can WSDOT do?

In volatile markets, contractors must place their own contingencies against inflation into fixed price bids. If their contingencies are larger than turn out to be required, windfall profits result. The opposite is also true, and can lead contrctors to significant losses on jobs. WSDOT and many other states across the country are now examining whether these risk elements can be removed from contracts in a volatile pricing environment by making bids subject to unit price adjustments from time-of-bid base bid costs. WSDOT has also worked with industry to allow contractors to expedite purchase of materials in order to be able to lock in key materials requirements for the jobs they win.

The Seven Common Construction Items That Make Up the WSDOT Construction Cost Index

The costs of these seven materials are calculated on a quarterly basis to determine WSDOT's construction cost index (CCI). Four of them are included in graphs on page 46 which show trends lines for increasing costs over the past 15 quarters.

Crushed Surfacing:
Crushed surfacing is used in construction of highways to establish a drainable base or platform underneath concrete pavement or Hot Mix Asphalt for the final roadway surface. Prices have held constant since 2004 based on the annual trendline.

Hot Mix Asphalt:
Hot Mix Asphalt is one of the common driving surfaces constructed for state roadways. Prices have increased 14.6% since the first quarter of this year based on the quarterly trendline.

Concrete Pavement:
Concrete pavement is another of the common driving surfaces constructed for state roadways. Prices have increased 13% since 2004 based on the annual trendline.

Structural Concrete:
Structural concrete is used to construct bridges and retaining walls. Prices have increased 27% since the first quarter of this year based on the quarterly trendline.

Steel Reinforcing Bar:
Steel reinforcing bars are used in bridges and retaining walls to reinforce the concrete. Prices have edged up roughly 1% since the first quarter of this year based on the quarterly trendline.

Structural Steel:
Structural steel is used to construct bridges and certain types of retaining walls. Prices have increased 9.7% since 2004 based on the annual trendline.

Roadway excavation:
Roadway excavation is the activity of moving the native material (soil) on a construction site from one area to another, or off site for disposal. Prices have increased 22% since the first quarter of this year based on the quarterly trendline.

Highway Construction: Quarterly Update

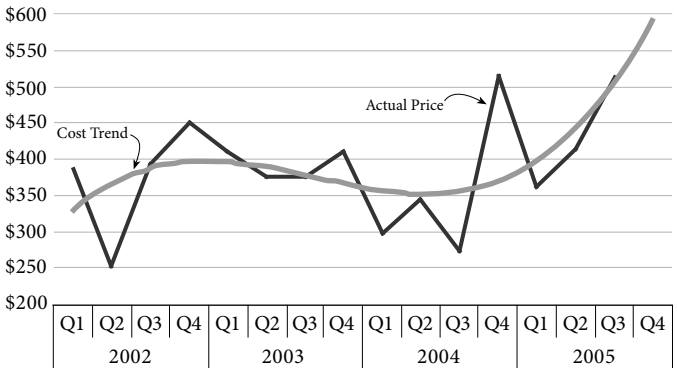
Bid History Graphs

The graphs below reflect the unit bid price for four major construction materials, and exemplify the increasing cost trend. "Unit bid price" means the amount the contractor bid per unit of material (e.g., dollars per cubic yard of structural concrete). Unit bid prices include labor costs, which is standard for the highway construction industry. Exact details are difficult to derive from the graphs shown but they are very useful in describing trends. It is difficult to derive exact details because project quantities vary substantially from project to project based on the size and geographical setting of the project. Rural projects generally tend to have unit bid prices on the lower end. Projects with larger quantities generally have lower unit prices, as the contractor is able to distribute its fixed costs over a broader base of units. With this said, the individual data points represent the trailing indicators, and the extension of the trend line is the crystal ball projection.

Structural Concrete

Quarterly Unit Bid Price

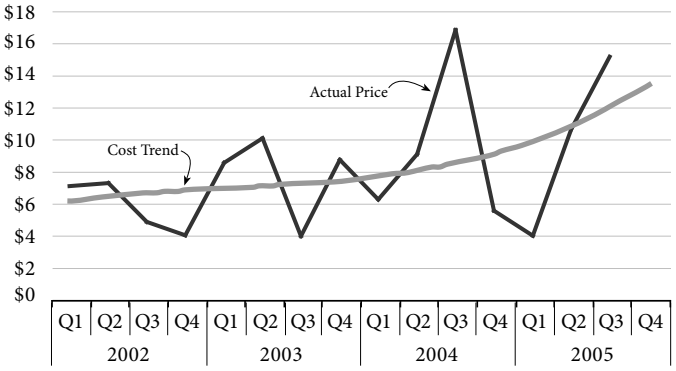
Dollars per Cubic Yard



Roadway Excavation

Quarterly Unit Bid Price

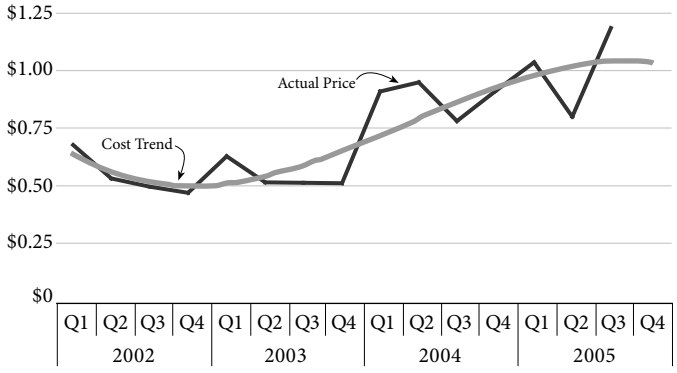
Dollars per Cubic Yard



Steel Reinforcing Bar

Quarterly Unit Bid Price

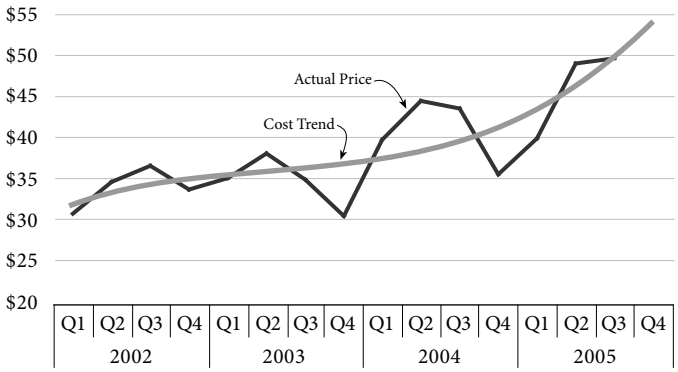
Dollars per Pound



Hot Mix Asphalt

Quarterly Unit Bid Price

Dollars per Ton



Highway Construction: Quarterly Update

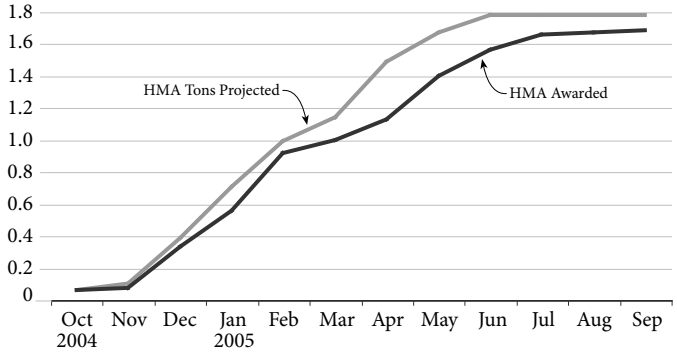
Hot Mix Asphalt for Awarded Contracts

In October 2004, WSDOT forecasted that contracts for 1,779,826 tons of Hot Mix Asphalt (HMA) would be awarded throughout the State by September 2005. The final amount was 1,685,394 tons awarded, which was 95% of the original forecast.

The award of HMA closely matched the forecast amount for the first few months, beginning in October 2004 through March 2005. In April 2005 the tons of HMA awarded lagged behind the original forecast, primarily the result of a couple of planned projects not being awarded due to higher than estimated bids. By September 2005 the tons awarded had closed some but not all of the gap.

2005 Hot Mix Asphalt Tons Awarded

Millions of Tons



Hot Mix Asphalt Pavement - Projected vs. Actual, 2002-2005

In Tons, Through September of each year

Year	Projected	Actual	% Difference
2002	1,373,465[1]	1,364,021	-1%
2003	1,417,126	1,825,442	+29%[2]
2004	1,324,218	1,299,377	-2%
2005	1,779,826	1,685,394	-5%

[1] The projection for 2002 was revised in March 2002 by the Transportation Commission following budget cuts.

[2] The 2003 "Nickel" Transportation Funding Package was passed after the projection was made for 2003. WSDOT subsequently awarded five projects from the Nickel funding package with a combined total of 315,285 tons of HMA.

These pictures tell the story of a Hot Mix Asphalt paving job on SR 2 near Orondo. To the left, trucks haul in the Hot Mix Asphalt (HMA) to the road site.

A truck, transfer vehicle, and paving machine place the HMA.

A roller compacts the HMA, and the road is repaved. A quality check and some restriping come next, then the road is open for business.

Tacoma Narrows Bridge Update

Bridge Construction

As of September 30, work on the SR 16 Tacoma Narrows Bridge (TNB) project is 74% complete. During the third quarter, Tacoma Narrows Constructors (TNC) reached a major milestone with the completion of the east and west towers. Crews are currently installing stairs within the towers. Full deployment of the catwalk, the worker access platform, including mesh, cross-walks, electrical, and illumination is nearly complete. Installation of spinning equipment on the ground has been completed. Crews conducted trial runs in the unreeling operation at the east anchorage area in September. Preparations for installation of spinning equipment on the catwalks are well underway with crews installing the tram support ropes and frames on the catwalk. Installation of the anchor rods into the anchorages, which support the main suspension cables, is complete. All eight of the cable saddles have been placed and grouted.

In South Korea, deck fabrication is 55% complete. In mid-September, a dispute between design-builder TNC and its overseas fabrication subcontractors resulted in a lawsuit, and halting overseas deck fabrication. TNC took quick action to address the fabrication shutdown, and as of late September fabrication work had resumed. WSDOT continues to believe it likely that the dispute will have no effect on the cost nor the on-time delivery of the project.

Roadway Construction

East of the bridge on the Tacoma side, the median barrier wall between Jackson Avenue and the bridge was constructed; a new stormwater outfall into the Narrows was completed; and crews performed seismic retrofit work on the existing bridge east anchorage and several of its piers and struts. Crews continued work at Living War Memorial Park with irrigation system installation, landscaping, and flagstone paving. Additionally, a new maintenance building at the east anchorage was completed.

Progress to Date

Percent Complete

Design	99.9%
Construction	72.0%
Total[1]	**74.0%**

Source: WSDOT Engineering and Regional Operations Division.

[1]Weighted 7% design progress and 93% construction progress. The percent completion is arrived at through an assignment of budgeted hours to the design and construction with both being weighted. The weighting is distributed as follows: Design contributes 7% toward the physical completion of the project whereas construction contributes 93%. Once the percent of progress is determined based on the budgeted hours, the weight is then applied for a percent of completion.

West of the bridge on the Gig Harbor side, crews completed the final lift of paving through the toll plaza; the temporary concrete batch plant was removed, and stormwater pond construction began. Construction on Pierce County roads is now nearly complete.

Toll Facility Construction

TNC reached a contract milestone by completing the Toll Operations Building, and the Toll Plaza segments. This milestone was reached 70 days earlier than required by contract. The WSDOT Toll Operations unit hired a Toll Operations Manager, Customer Service Manager, and a Financial Analyst. The Quality Assurance and Quality Control Plan, Test Plan, and Final System Design Document for the toll system were approved. Toll operations contract negotiations between WSDOT and TransCore are 95% complete.

For additional information, including financial information, project schedule, traffic information, photo library, live construction cameras and more, please visit: www.tacomanarrowsbridge.com

A view of workers securing catwalk mesh to the floor strand on the main span of the bridge

Construction of a shelter at the Living War Memorial Park dedication monument

Electrical inspection of catwalk on the Gig Harbor side of the span

Hood Canal Bridge Update

View of the Hood Canal Bridge

Work at the Hood Canal Bridge site continues in three main areas: replacement of the east-half anchor cables; widening of the west-half road deck; and replacement of the approach spans at each bridge end.

Anchor Cable Replacement

General Construction completed the replacement of 17 east-half anchor cables in July. Anchor cable placement was then checked via a remote operated vehicle. This special piece of equipment is leased. It is a submersible device with a camera mounted on it. WSDOT inspectors examined videotapes taken by the remote operated vehicle to ensure proper anchor cable placement.

West-Half Widening

The bridge's west half is being widened to match the new east half. Last year, WSDOT's contractor, Kiewitt-General of Poulsbo, extended the south side. This summer, the contractor will finish widening the north half. The contractor, Kiewit-General, has formed deck sections, poured concrete for the new deck and concrete traffic barrier, and installed railings. In addition to widening the concrete road deck, the contractor is widening the west half steel draw span. The remaining step is to install a new traffic gate.

Bridge Closures

The Hood Canal Bridge project reached a major milestone in August when the contractor replaced both bridge approach spans by rolling away the existing bridge sections and rolling into place new sections of roadway (see top photo at right).

West Approach Span Replacement

The contractor replaced the 1,100 ton, 190-foot-long west end approach span. They began work on Thursday, August 11 at 8 P.M. and completed the operation two days later. The bridge reopened Saturday night, August 13 at 10:20 P.M., more than a day ahead of its Monday morning deadline.

WSDOT specified unique methods such as pre-cast roadway sections and walls that aided in the shorter closure period. The old approach span was moved onto temporary pilings in just 2.5 hours. The new west-end approach span was in place by 6 P.M., about four hours ahead of schedule.

East Approach Span Replacement

Increased crew size helped the contractor move ahead on approach slab work at the same time as pier demolition and the new approach span roll. Coordinating the work in this manner helped move the closure ahead of schedule. Work began 8 P.M., Sunday evening, August 21. The contractor did not experience major problems rolling the new approach span (more than two football fields long) into place on August 22. The replacement of the bridge's east-half 640-foot-long approach span was completed Wednesday evening at 8:42 P.M., August 23, more than a day ahead of the planned schedule.

The old east approach span (the structure on the left side of the photo) moves south to reveal the bridge support structure below. The new east approach span (on the right) moves in to replace the old east approach span.

Kiewitt-General Construction crews use a crane to install the heavy east approach pre-cast roadway sections.

For more information about the Hood Canal Bridge project, visit www.hoodcanalbridge.com.

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Bridge Inventory

WSDOT Structures	No. of Bridges	Square Feet
Bridges greater than 20 feet in length*	2,977	43,345,388
Structures Less than 20 Feet in Length	261	na
Border Bridges (maintained by Border State)	6	na
Culverts greater than 20 feet in length	88	na
Pedestrian Structures	57	249,730
Tunnels and Lids	38	739,381
Ferry Terminal Structures	45	248,443
Buildings (I-5 Convention Center)	1	na
Railroad Bridges	84	na
Totals of all Structures	3,555	44,582,942

* For comparison, cities and counties own 3,929 bridges greater than 20 feet

Vehicular Bridges greater than 20 feet in length
The number of vehicular bridges has increased from 2,967 to 2,977 since June 2004 as a net result of new bridges being built and added to the system.

Structures less than 20 feet in length
This number has increased from 257 to 261 since June 2004 due to additional structures that have been added to the State's inventory.

Culverts greater than 20 feet in length
This number has increased from 80 to 88 for the same reason.

Annual Bridge Condition Update

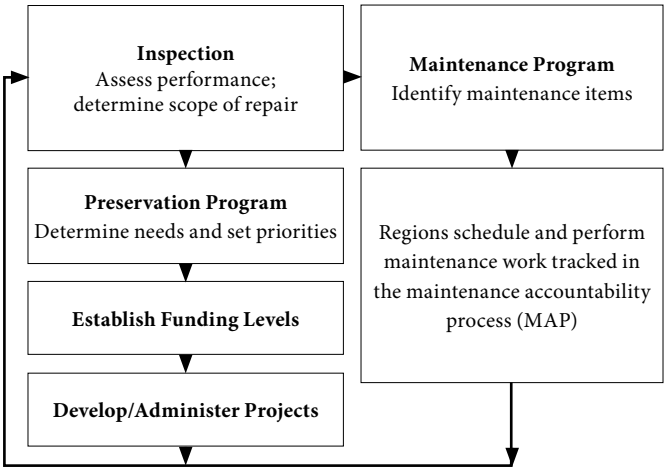
WSDOT reports the condition of WSDOT's bridges to the Office of Financial Management (OFM) in accordance with reporting standards set by the Governmental Accounting Standards Board (GASB). The rating system for bridges follows criteria set for the country as a whole by the Federal Highway Administration (FHWA). WSDOT's policy is to maintain 95% of its bridges at a structural condition of at least fair. The assessment in 2005 found that state-owned bridges were within these parameters: just two percent of bridges showed a condition rating of "poor." No bridge that is currently rated as "poor" is unsafe for public travel. Bridges determined to be unsafe are closed to traffic.

The condition rating data shown at right is based on the structural sufficiency standards established in the FHWA "Recording and Coding Guide for the Structural Inventory and Appraisal of the Nation's Bridges." This structural rating relates to the evaluation of bridge superstructure, deck, substructure, structural adequacy and waterway adequacy.

Category	Description	2000	2001	2002	2003	2004	2005
Good	A range from no problems to some minor deterioration of structural elements.	84%	85%	87%	86%	87%	89%
Fair	All primary structural elements are sound but may have deficiencies such as minor section loss, deterioration, cracking, spalling or scour.	11%	11%	10%	11%	10%	9%
Poor	Advanced deficiencies such as section loss, deterioration, cracking, spalling, scour or seriously affected primary structural components. Bridges rated in poor condition may be posted with truck weight restritions.	5%	4%	3%	3%	3%	2%

WSDOT Preservation Program

Bridge repair needs are identified through the inspection program. Once a needed repair has been identified, the urgency of the repair is determined and a list of bridge repairs is provided to each region's bridge maintenance office. Engineers review repair options and determine if the repair can be achieved within the scope of maintenance activity. The regional maintenance office tracks and manages these repairs through the Maintenance Accountability Process (MAP) system. Bridge repairs that are outside of the reach of maintenance activities are identified and prioritized in the bridge preservation program.



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Bridge Preservation Program

WSDOT's Bridge Preservation Program consists of the following four main program elements:

Inspection – Inspect one-half of all bridges every year.

Repair, Rehabilitation, and Replace – Repair bridges with deteriorated bridge elements such as concrete columns or floating bridge anchor cables. Rehabilitate mechanical and electrical operating systems on moveable bridges. Replace bridges as needed.

Preservation – Extend bridge service life by repainting steel structures; also repair and overlay of concrete bridge decks.

Risk reduction – Seismic retrofit of bridges and scour repair of bridge piers in rivers. This work provides a proactive approach to minimizing damage to bridges due to earthquake and higher water events.

Bridge Inspection

WSDOT inspects one-half of all traffic bridges every year. Bridge engineers also inspect floating bridge cables, tunnels, ferry terminal structures, sign bridges, and make a bridge inspection response if a bridge has been damaged by a vehicle or vessel.

Underwater Inspection Team

The Bridge Office Underwater Dive Team, formed in June 2004, enables WSDOT to perform underwater inspections and respond quickly to underwater emergencies. Over the past year the team has completed over 100 production dives in extreme conditions. The dive schedule has resulted in the completion of 32 State and 17 Local Agency bridge inspections.

Previously underwater inspections were contracted out . Initial estimates of annual savings of the dive team to WSDOT were $100,000. This figure is now being revised upwards to $150,000. This savings includes all labor and equipment purchases to date.

Darren Nebergall (left) and Shawn Plichta (right) at Port Washington Narrows, Bremerton, WA.

Bridge Replacements

The bridge preservation program includes funding for the replacement of selected bridges. Currently, there are three bridge replacement projects under construction:

SR 104 Hood Canal Bridge (near Port Gamble)

Replacement of the aging east half floating portion and widening of the west-half superstructure continues. See the story on page 49. More information is available at www.wsdot.wa.gov/projects/sr104hoodcanalbridgeeast/.

SR 240 Yakima River Bridge (near Richland)

Replacement of the old 1950 Yakima River Bridge with two new parallel bridges is nearly complete. Remaining work includes paving the new bike/pedestrian path and placing plants in the new wetland area under the south end of the new bridges. The project is scheduled for final completion by the end of October 2005. More information is available for this project at www.wsdot.wa.gov/Projects/SR240/Yakimariverbridge/.

U.S. 12 Coppei Creek Bridge (near Waitsburg)

The Coppei Creek Bridge was constructed in 1920. The waterway opening under the bridge is restrictive, causing water to flow over the approach roadway during peak flows.

The City of Waitsburg, WSDOT and the U.S. Army Corps of Engineers work together to help alleviate the flooding in the community. The U.S. Army Corps of Engineers is designing the dike system. WSDOT is replacing the bridge, reconstructing the U.S. 12 tie-in, and working with the U.S. Army Corps of Engineers to obtain additional funds to construct the dike. The construction project was awarded to A & R Construction of Lewiston Idaho on June 6, 2005. The estimated project cost is $2.3 million. The project is scheduled to be open to traffic by the end of November 2005. More information is available at www.wsdot.wa.gov/projects/US12/CoppeiCreekBridge/.

Additional bridges scheduled to go to contract for replacement during the 2005-07 biennium:

U.S. 97 Satus Creek Bridge (near Toppenish)

The existing bridge, constructed in 1942, is structurally deficient. The existing curve on U.S. 97 in this area is substandard. Several accidents have occured at this location. Over 1,000 trucks travel through this section of U.S. 97 every day.

The new wider bridge and straighter roadway will improve safety, as well as stream flow and habitat conditions in Satus Creek. This project will also reconfigure two main access points to Tribal Lands.

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WSDOT is scheduled to complete the design Fall 2006. Construction is scheduled to begin Spring 2007. The total project cost is estimated at $7 million. More information is available on the WSDOT web page for this project at www.wsdot.wa.gov/Projects/US97/SatusCreekBridge/.

Major Repairs

The major repair portion of the bridge preservation program includes projects for capital rehabilitation work beyond the scope of maintenance programs. This corrective work addresses a specific bridge element in need of repair and is not intended to upgrade all deficiencies. A prioritized list of major repair needs for bridges is developed each biennium. There are six major bridge repair projects scheduled to go to contract in the 2005-07 biennium. Emergency contracts are used when unexpected bridge problems occur, and when repair is needed right away.

Existing U.S. Satus Creek Bridge

I-5 East Fork Lewis River Bridge (near Woodland)
This bridge was constructed in 1936. Annual inspections have noted an increase in the number of connections that are cracking. Over the years, trucks have caused fatigue cracking in the steel stringers that support the concrete deck in the steel truss at many connection locations. The truck weight when the bridge was originally designed was much less compared to the current conditions and standards.

This project to repair the steel stringer cracking and replace the expansion joints is scheduled for contract in Spring 2006.

I-5 McCallister Creek Bridge Column Repair (near Lacey)
This bridge was constructed in 1968. The planned repair project will add steel jackets to three existing deteriorating columns and address the seismic retrofit needs located at Pier 2 in McCallister Creek. The repair project is scheduled for construction in Summer 2006.

I-5 East Fork Lewis River Bridge

Deteriorating column at Pier 2 in McCallister Creek

SR 153 Methow River Bridges Rail Replacement and Deck Repair (near Methow)
These bridges were constructed in 1939. The bridge deck surfaces, rails, and sidewalks show advanced signs of deterioration on Bridges 153/3, 153/4, 153/10, 153/14, and 153/15. The bridge rails will be removed and replaced, and the concrete deck surfaces will be repaired and overlaid with Hot Mix Asphalt. Sidewalks on two of the bridges (153/10 and 153/14) will be retrofitted with supports.

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SR 153 Methow River Bridge

This project is scheduled for advertisement in October 2006. Construction is to begin in Spring 2007 with completion by Fall 2008. More information is available at www.wsdot.wa.gov/Regions/NorthCentral/projects/SR153MethowRiverBridge/.

I-5 Southbound Viaduct Expansion Joint Replacement (near Seattle)
This bridge was constructed in 1969. Many of the bridges' steel expansion joints need to be replaced. Years of wear and rutting in the concrete adjacent to the expansion joints have caused excessive deterioration. Replacement of the expansion joints is scheduled for advertisement in Fall 2006, with construction to begin in Summer 2007.

Movable Bridge Repair

Movable bridge repairs include corrective work on electrical and mechanical systems that cannot be accomplished with routine maintenance. A prioritized list of movable bridge repair needs is developed each biennium. The following bridge repair projects are under contract or scheduled to begin construction in the 2005-07 biennium.

SR 529 Snohomish River Bridges (near Everett)
This project is under contract and has been awarded to Mowat Construction Company. The project will repair corroded steel elements in the draw span tower and add catwalks for maintenance employees to both the east and west bridges. Construction is expected to end in Fall 2006.

U.S. 12 Heron Street Bridge (near Aberdeen)
This repair project will modify the bridge to allow proper seating of the steel swing span during the closing of the bridge. The movable span sags when opened in hot weather making it difficult to close. Construction on this project is expected to begin in Spring 2006.

U.S. 101 Simpson Avenue Bridge (near Hoquiam)
This bridge was constructed in 1928. The repair project will modify deficient electrical and mechanical components. Construction on this project is expected to begin in the Spring 2006.

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Preservation and Risk Reduction

Steel Bridge Painting
Protective coatings painted on steel bridge elements are essential to prevent corrosion and eventual loss of use for traffic capacity. Steel bridges typically need to be repainted every 15 to 20 years. WSDOT schedules a bridge to be over coated with new paint when two to five percent of the existing paint has failed. Bridge painting can become a major project because of the size of the steel structures and the complexity of safety, environmental and containment system requirements.

Currently there is one project under contract, SR99 Duwamish River, and two projects scheduled for construction in the 2005-07 biennium.

SR 99 Duwamish River Bridge (near Seattle)
This project will paint the East bridge which is under contract for the second time in two years. The first contract was cancelled due to difficulties balancing the weight of the paint containment system during bridge openings for marine vessels.

The bridge is a moveable draw span and has the most openings of any state owned moveable bridge in Washington State. The bridge has an open steel grid deck that must be sealed prior to cleaning and painting. Because of environmental restrictions in the current contract regarding the Duwamish River, the cleaning process uses abrasive blasting material that must be fully contained. Vehicle traffic has to be restricted in order to prevent damage to the containment system. Therefore, cleaning and painting must be performed at night. Nearly half of the bridge is completed with the other half scheduled to be completed in Summer 2006.

Duwamish River Bridge

Lewis and Clark Bridge

SR4 33 Columbia River Lewis & Clark Bridge (near Longview)
This bridge crosses the Columbia River between Longview Washington and Rainier Oregon. The bridge was last painted in 1984. Repainting is scheduled for the Summer 2006. The cost of the project is estimated to be nearly $19 million and will be shared equally between Washington and Oregon.

I-90 East Channel Bridges (near Bellevue)
These bridges were constructed in 1981 with "weathering steel". Weathering steel is designed to rust but not corrode excessively. Over the years water has leaked through the concrete deck into the inside of the steel box units. The water has ponded in areas and caused the steel to corrode beyond acceptable limits. The project to overcoat the steel along the inside bottom surfaces with a clear rust penetrating epoxy is scheduled for contract in Spring 2006.

Bridge Deck Protection
Concrete bridge deck deterioration (from corrosion of the reinforcing steel) has been the largest single bridge-related problem throughout the country for years. Since the early 1980's, WSDOT has carried out a systematic program to prevent future concrete deck deterioration by using epoxy-coated rebar in new bridges, and repairing deterioration and traffic-related wear in existing bridges with new durable protective overlays. There are 15 bridges in eight projects that are scheduled for concrete deck repair and protection construction in the 2005-07 biennium.

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I-90 Spokane Viaduct (near Spokane)
The existing bridge decks were overlaid in 1985-86 with a 1.5-inch thick latex modified concrete. Heavy traffic with a high percentage of studded tire use has severely rutted the surface of I-90 in downtown Spokane. The project will remove and replace the existing concrete overlay on the mainline bridges.

The first phase of this project is scheduled for construction in Summer 2006 and will address the East side of the Viaduct Bridges. The second phase is scheduled for construction in Summer 2007 and will address the West side of the Viaduct Bridges. The total project cost is estimated to be nearly $15 million. More information is available at www.wsdot.wa.gov/Regions/Eastern/projects/I90/SpokaneViaductBridgeDeck/.

Risk Reduction

Seismic Retrofit
The purpose of the Seismic Retrofit program is to minimize and avoid catastrophic bridge failures by retrofitting bridges and structures. There are three projects currently under contract and four additional projects scheduled for construction in the 2005-07 biennium. Seismic bridge projects in progress:

I-5 North Seattle Bridges Seismic Retrofit
This project will retrofit seven bridges on I-5 in North Seattle area. Crews will retrofit the bridges by strengthening 22 concrete columns with steel jackets and adding restrainers on the end of the structures to decrease movement during an earthquake.

This project was originally awarded to PCT Construction, Inc. in May 2004 with completion scheduled for Spring 2005. The contact was canceled due to disagreements over scope and subsequent project costs. The project is currently being re-advertised for bids with a scheduled award date in November 2005. The contract cost estimate is $1.1 million. Updated project information is available at www.wsdot.wa.gov/projects/I5/NSeattleBridge_Retrofit.

SR 99 Spokane Street Overcrossing Seismic Retrofit Phase 3
This project is the last phase of seismic retrofit work on the Spokane Overcrossing Bridge. Wilder Construction Company will retrofit the bridge by strengthening the connections of the outrigger beams and the columns with steel jackets. Recently completed research by Washington State University provided WSDOT bridge engineers with information used to design the outrigger beam to column connection details. The contract was awarded in June 2005 and is scheduled to be completed in the spring of 2006. The contract cost is $708,000.

U.S. 2 Everett Vicinity Bridge Seismic Retrofit
This project will retrofit two sections of the westbound U.S. 2 Ebey Island Viaduct, two bridges on I-5, and a pedestrian bridge on SR 526. The contractor will retrofit the concrete bridge columns with steel jackets. The project was awarded to Wilder Construction of Everett in September 2005. The project is scheduled to be completed in Fall 2006. The contract cost is $4.6 million. Updated project information is available at www.wsdot.wa.gov/projects/us2/EverettSeismicRetrofit.

Scour
Historically, more bridges have collapsed from the scour of bridge foundations than from any other cause. Scouring is the action of rushing water on the rocky foundation holding up a column. Since 1923, there have been 70 bridge failures documented in Washington State. The astounding fact is that 43 of these failures were the direct result of foundation scour due to flooding. The most recent major bridge scour event happened in 1999 on SR 101 at the Nolan Creek Bridge.

Each biennium a list of bridges is developed requiring some type of scour mitigation action. Scour repair always involves working in water. WSDOT coordinates closely with, and usually receives stringent permit conditions from, the state Department of Fish and Wildlife. Most repairs consist of adding rock "rip-rap" around bridge pier foundations to replace streambed material that had been removed over time.

Two scour mitigation projects have been completed by contract, and two bridges were repaired by WSDOT maintenance crews. Eleven additional bridges are scheduled for repair in the 2005-07 biennium.

SR 8 Middle Fork Wildcat Creek Culvert Retaining Wall Replacement and Scour Repair (near McCleary)
This culvert at milepost 5.01 was built in 1962 and carries four lanes of SR 8 eastbound and westbound traffic above it. The culvert has four independent retaining walls at each corner. Previous inspections noted exposed footings in both the culvert and the retaining walls due to scour of the foundation material. In 2004 this project was given a high statewide priority.

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Middle Fork Wildcat Creek Culvert April 2005

Middle Fork Wildcat Creek Culvert September 2005

In April 2005, WSDOT engineers observed the southeast retaining wall rotated away from its original position. Scour of the retaining wall foundation was determined to be the cause of the movement in the wall. Engineers decided that an urgent repair was needed to prevent a total failure of the wall and the fill material under the eastbound lanes of SR 8. The repair project needed to be completed by October 2005 to meet water restrictions by the Department of Fish and Wildlife.

The design of a repair project included replacement of the southeast retaining wall and reconstruction of the fill material through the culvert with new rocks and streambed material. Woody debris was added to the stream to enhance the fish habitat. The water in the creek was temporarily diverted using pumps and pipes through the culvert.

The project was advertised in August 2005 and awarded to Roglins Construction. The in-water work on the project was completed on September 30, 2005. The contract cost was nearly $450,000.

I-5 Steamboat Slough Bridges Scour Repair (near Marysville)

Previous underwater inspections of these bridges found the riverbed had migrated and reduced the original channel bottom by as much as 10 feet in the vicinity of Pier 8 on both the east and west bridges. The timber piles that provide support for the foundations were exposed. A contract to repair the scour, including removing large woody debris and placing heavy loose rip rap around Pier 8, was prepared and awarded to American Construction Company, Inc. on June 6, 2005 for $122,084. The contract work was completed and verified by underwater divers in September 2005.

Measuring Delay and Congestion: Annual Update

Traffic delay and highway congestion are major topics for WSDOT. Measuring delay and congestion, a much more complicated matter than might at first be guessed, is an indispensable part of understanding and developing an array of remedies. WSDOT has tried to develop congestion measurements and benchmarks to present a clear and accurate picture of what's happening on some of Washington state's most congested freeways. This approach to congestion focuses on developing ways of measuring efficiency, reliability and progress that people can see and experience. WSDOT will concentrate on reporting the effectiveness of congestion relief programs in support of reliable travel times and greater system efficiency for commuters.

In conjunction with the Washington State Transportation Center (TRAC) at the University of Washington, WSDOT has tracked and analyzed data for several measures of traffic congestion since 2002. In the March 2002 and March 2003 annual updates, the congestion report described how congestion robs roadways of their productivity. In the September 2004 congestion update, WSDOT began moving toward more comprehensive measures of delay and congestion (see the gray box to the right for more information.) This edition of the congestion report, reporting data for the 2004 calendar year, expands on the approaches taken in the previous versions. The topics presented can be found on the following pages:

For more information on some of the specific programs WSDOT is pursuing to improve roadway use efficiency, refer to the Incident Reponse Report on page 74 and the Commute Options Report on page 78.

Current Puget Sound Travel Times:
www.wsdot.wa.gov/traffic/seattle/traveltimes
Calculate Your 95% Reliable Commute Time:
www.wsdot.wa.gov/traffic/seattle/traveltimes/reliability

Definitions of Congestion Performance Measurement Terms

Peak Travel Time. This peak five minute interval for congestion and delay is calculated from the weekday average of travel times for the time listed.

Percent Change in Traffic Volume. The change in the number of vehicles driving along the route during peak times.

Percent of Days When Travel Times Exceeded Twice Free Flow (Slow Travel Days). The percentage of days that a rush hour trip would take twice as long when compared to a trip during which there was no traffic congestion.

The 95% Reliable Travel Time. A measure for travel times. Unlike *average* travel time, it is an estimated travel time with 95% certainty. It is the "safe bet" time for travel planning. For example, if you travel during peak time five days a week for a four-week period (i.e., a total of 20 weekdays), you will get to the destination within the time indicated by the 95% Reliable Travel Time 19 days out of those 20 days (i.e., 95% certainty).

Throughput. A measure of the number of vehicles that can pass through a roadway segment during a given time period, typically measured for one hour.

Induction Loop Detectors. The most common technology used to collect real-time data on traffic flow. Embedded in the pavement, these electronic devices measure vehicle count and how long the vehicle occupies the loop - i.e., traffic speed.

WSDOT's Congestion Measurement Principles:

- Use real-time measurements (rather than modeling) whenever possible.
- Measure congestion due to incidents as distinct from congestion due to inadequate capacity.
- Show whether reducing congestion from incidents will improve travel time reliability.
- Use plain English to describe congestion measures.
- Demonstrate both long-term and short-to-intermediate term results.
- Communicate about possible congestion fixes using an "apples to apples" comparison with the current situation (for example, if the trip takes 20 minutes today, how many minutes shorter will it be if we improve the interchanges?)

Measuring Delay and Congestion: Annual Update

Peak Travel Times

Key Commute Routes: Changes in Travel Time Performance 2002[1] to 2004

Ranking

Routes in this table are ranked by the % Change column below from the largest percent improvement to the largest percent deterioration.

					Peak Travel Time (in minutes)				Traffic Volume	Percent of "Slow Travel Days": Days When Travel Times Exceeded Twice the Time Associated with Freeflow		95% Reliable Travel Time (in minutes)			
Ranking	**Route**	**Route Description**	**Peak time**	**Length[1] (Miles)**	**2002[1]**	**2004**	**Change**	**% Change**	**% Change since 2002**	**2002**	**2004**	**2002[1]**	**2004**	**Change**	**% Change**
1	SR 167	Renton to Auburn	5:20 PM	9.8	20	17	-3	-15%	1%	39%	21%	38	33	-5	-13%
2	I-5	Seattle to SeaTac	4:10 PM	12.9	20	19	-1	-5%	5%	20%	4%	32	25	-7	-22%
3	I-90/I-5	Issaquah to Seattle	7:40 AM	15.5	23	23	0	0%	1%	6%	7%	31	32	1	3%
4	I-5/I-90	Seattle to Issaquah	5:35 PM	15.7	23	23	0	0%	5%	9%	12%	33	35	2	6%
5	I-405/I-90/I-5	Bellevue to Seattle	7:45 AM	10.7	15	15	0	0%	0%	5%	7%	21	23	2	10%
6	SR 520/I-405	Redmond to Bellevue	7:50 AM	7.1	10	10	0	0%	2%	1%	4%	11	13	2	18%
7	I-405/I-90	Bellevue to Issaquah	5:35 PM	9.3	16	16	0	0%	2%	18%	14%	21	21	0	0%
8	I-5/SR 526	Seattle to Everett	4:45 PM	23.7	42	43	1	2%	-1%	26%	28%	62	66	4	6%
9	SR 520/I-5	Redmond to Seattle	7:40 AM	14.8	22	23	1	5%	2%	6%	10%	30	33	3	10%
10	I-90/I-405	Issaquah to Bellevue	7:45 AM	9.5	17	18	1	6%	2%	21%	35%	25	27	2	8%
11	I-5/SR 520/I-405	Seattle to Bellevue	5:35 PM	10.6	17	18	1	6%	0%	18%	29%	26	31	5	19%
12	I-405/I-90	Bellevue to Tukwila	4:30 PM	13.5	26	28	2	8%	0%	33%	59%	36	39	3	8%
13	I-405/SR 520	Bellevue to Redmond	5:45 PM	6.8	13	14	1	8%	-3%	33%	54%	17	22	5	29%
14	I-5	SeaTac to Seattle	7:45 AM	12.9	23	25	2	9%	2%	4%	28%	28	34	6	21%
15	SR 526/I-5	Everett to Seattle	7:20 AM	23.7	44	48	4	9%	1%	35%	52%	66	74	8	12%
16	I-5/SR 520/I-405	Seattle to Bellevue	5:35 PM	10.1	18	20	2	11%	-1%	29%	43%	28	31	3	11%
17	I-405/SR 520/I-5	Bellevue to Seattle	7:50 AM	10.5	17	19	2	12%	-1%	14%	34%	24	27	3	13%
18	I-405	Tukwila to Bellevue	7:45 AM	13.5	32	36	4	13%	-1%	73%	80%	51	52	1	2%
19	SR 167	Auburn to Renton	7:25 AM	9.8	15	17	2	13%	-1%	7%	17%	22	26	4	18%
20	I-5/SR 520	Seattle to Redmond	5:35 PM	14.7	26	30	4	15%	-1%	30%	49%	37	43	6	16%

Source: WSDOT Traffic Operations and Washington State Transportation Center (TRAC) at the University of Washington

If you regularly drive to work in the Central Puget Sound area, you generally know how long it takes to commute. You know through experience when to leave work to avoid bad congestion, or which alternative route to take in case of an unexpected traffic slow down. But do you know if your commute is better or worse than two years ago? What about the status of alternative routes near your commute? To manage traffic and to answer questions like these, WSDOT collects traffic data through induction loop detectors. The counters record data, 24 hours a day. The data serves multiple purposes, providing real-time traffic conditions to motorists through the WSDOT website, managing the elements of the traffic system that control the flow of traffic such as ramp meters, and monitoring long-term traffic patterns. The table above represents 20 key commute routes in the Central Puget Sound area, and compares results from 2002 to 2004 in various measures of travel conditions during A.M. and P.M. peak times.

[1] The 2002 data serves as the baseline year for these congestion measures. The trip routes and travel time estimates were reviewed and updated for this year's congestion report to improve compatibility when comparing results in the table from different years. The updates primarily involved adjustments to the definition of some trips (endpoints and data collection locations) based on a review of the combined data quality for 2002, 2003, and 2004, as well as the use of updated data quality evaluation techniques. As a result, some trip attributes used in the previous congestion report were modified to improve the ability to perform year-to-year comparisons of values in this year's travel time table. The lengths of some commute routes increased. For several commutes, 2002 data for Average Peak Travel Time increased by one minute, and 2002 data for 95% Reliable Travel Time increased by two to three minutes. One route, I-5 SeaTac to Seattle, increased by 10 minutes in 95% Reliable Travel Time, from 18 to 28 minutes.

Measuring Delay and Congestion: Annual Update

Summary of the Changes in Peak Travel

Ten of 20 commutes showed no change (zero minutes) or very small changes (plus or minus one minute) in average peak travel times from 2002 to 2004.[1] One route (*Renton to Auburn, SR 167 afternoon commute)* showed significant improvement. The commutes toward the bottom of the ranking showed deteriorated traffic situations in all the measures (also refer to the graphs on page 61).

Routes with Improvement

The two routes with the greatest improvements were:

Renton to Auburn, SR 167 afternoon commute. Peak travel time fell by three minutes, from 20 minutes in 2002 to 17 minutes in 2004. The percent of Slow Travel Days decreased by 18 percentage points, from 39% to 21%, while the 95% Reliable Travel Time had a five minute reduction. This improvement was related to a $40,000 restripe project *SR 167 - 15th St. NW Restripe* just north of the SR 18 interchange (a major back-up spot) that effectively eliminated a bottleneck and improved traffic flow around the interchange. For more information on this project, refer to the congestion report in the September 30, 2004 *Gray Notebook*.

Seattle to SeaTac, *I-5 afternoon commute*. The travel time reduction was only one minute, but with a 16-percentage point decrease in the Slow Travel Days and a seven minute reduction in the 95% Reliable Travel Time. This improvement came despite the fact that the number of vehicles driving the route during the peak period increased by 5%. The improvement seems to have been linked to the *I-5/Pierce County Line to Tukwila Stage 3 HOV* project, which extended the southbound HOV lane along this highly congested stretch of freeway from SR 516 in Kent to South 320th Street in Federal Way.

See the related graphs on page 61 for more details on both of these commutes.

Routes with Little or No Change in Travel Condition

Of the ten routes with travel times that stayed the same or increased slightly (by one minute), travel conditions did not change much overall for six routes (ranking numbers 3-8). For these six routes, there was also little change in the Slow Travel Days and the 95% Reliable Travel Times were not affected significantly.

[1] Changes of plus or minus one minute in average travel times may not be significant because travel times are rounded to the nearest whole minute, and some are very close to zero/no change.

Routes with Deteriorated Travel Condition

There were eight commutes (ranking number 12, and 14 through 20) for which travel times increased by two minutes or greater. On these commute routes, Slow Travel Days also increased significantly (almost doubling for some commutes), and there were large increases in the 95% Reliable Travel Times.

The route with the worst deterioration was the 13.5-mile *Tukwila to Bellevue I-405 morning commute*. Average travel time increased by four minutes. Slow travel days prevailed most weekdays (73% in 2002 and 80% in 2004). The 95% Reliable Travel Time did not change much (by only one minute). The actual *travel time per-mile* was the worst of all the 20 commutes.

More Congestion Means Fewer Cars?

The table clearly shows one of the most frustrating realities of everyday freeway traffic: there is a certain point on every freeway where more cars cause traffic to congest and the very fact of congestion then causes the *throughput* of the freeway to drop. As congestion causes drivers to slow, highway throughput is strangled and fewer vehicles (and fewer people) are served by the highway than at optimum flow conditions. At the optimal speed and spacing, one additional car joining the flow *adds* to the freeway volume. But when the optimal condition speed and spacing condition is exceeded, additional vehicles cause the freeway volume (and speed) to begin to break down. Congestion makes itself worse. Speeds drop. Throughput drops. Fewer cars are passing through the roadway segment. The usefulness of the highway diminishes.

Several routes in the table seem to be illustrating this phenomenon. For example, for the five lowest-ranking commutes on the table on page 58, travel time increased, but traffic volume actually went down.

The mix of congestion fighting strategies includes operational improvements like ramp meters to right driver bunching and braking, incident response programs to remove blocking accidents and stalls, and physical roadway improvements including, where possible, new lanes. The two commutes described earlier, *Seattle to SeaTac*, *I-5 afternoon commute* and *Renton to Auburn, SR 167 afternoon commute,* show how capacity increases could improve travel conditions.

Measuring Delay and Congestion: Annual Update

Next year's report will include congestion measures data for the following routes:

The "reverse commute" for several of the current routes. (Example: WSDOT now reports on only Seattle to Redmond A.M., and Redmond to Seattle P.M.; next year, WSDOT plans to report on Redmond to Seattle A.M. and Seattle to Redmond P.M. as well).

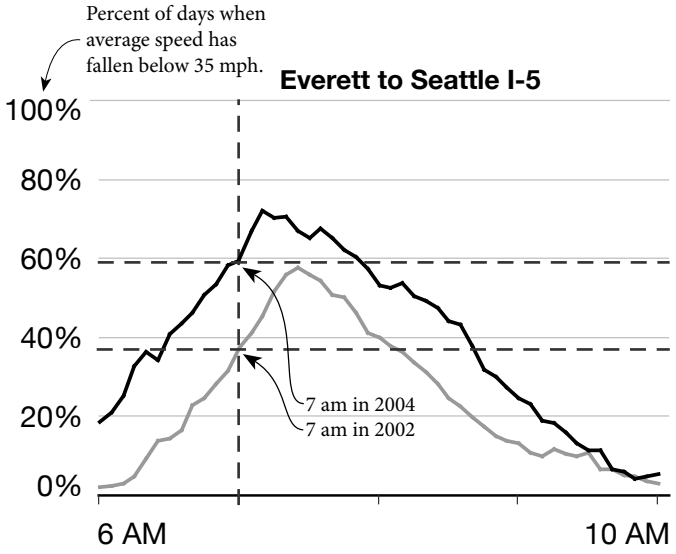
Everett to Bellevue A.M., Bellevue to Everett P.M.

Federal Way to Seattle A.M., Seattle to Federal Way P.M.

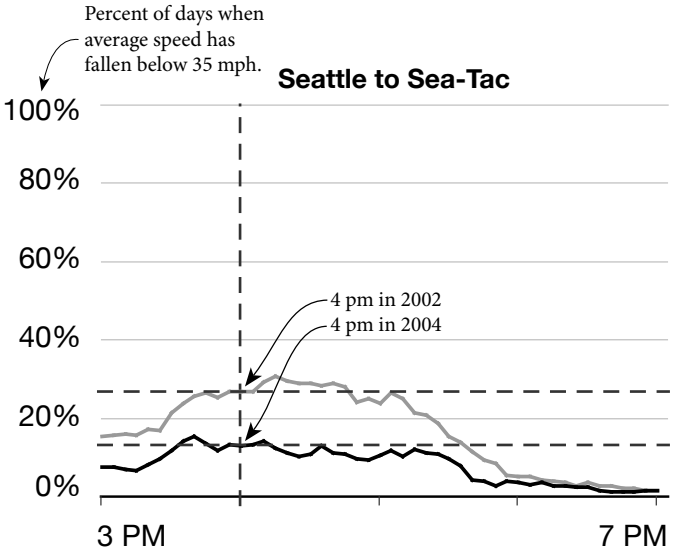
Bothell to Bellevue A.M., Bellevue to Bothell P.M.

Percent of Days When Speeds Were Less Than 35 MPH - Twenty Puget Sound Commutes

How frequently (and when) did the average trip speed drop under 35 mph? Comparing 2004 to 2002.



At 7:00 am in 2002, you had about a 36% chance that traffic would be moving less than 35 mph. In 2004, the situation became worse (black line above the gray line); your chance that traffic would be moving slower than 35 mph was about 59% in 2004.

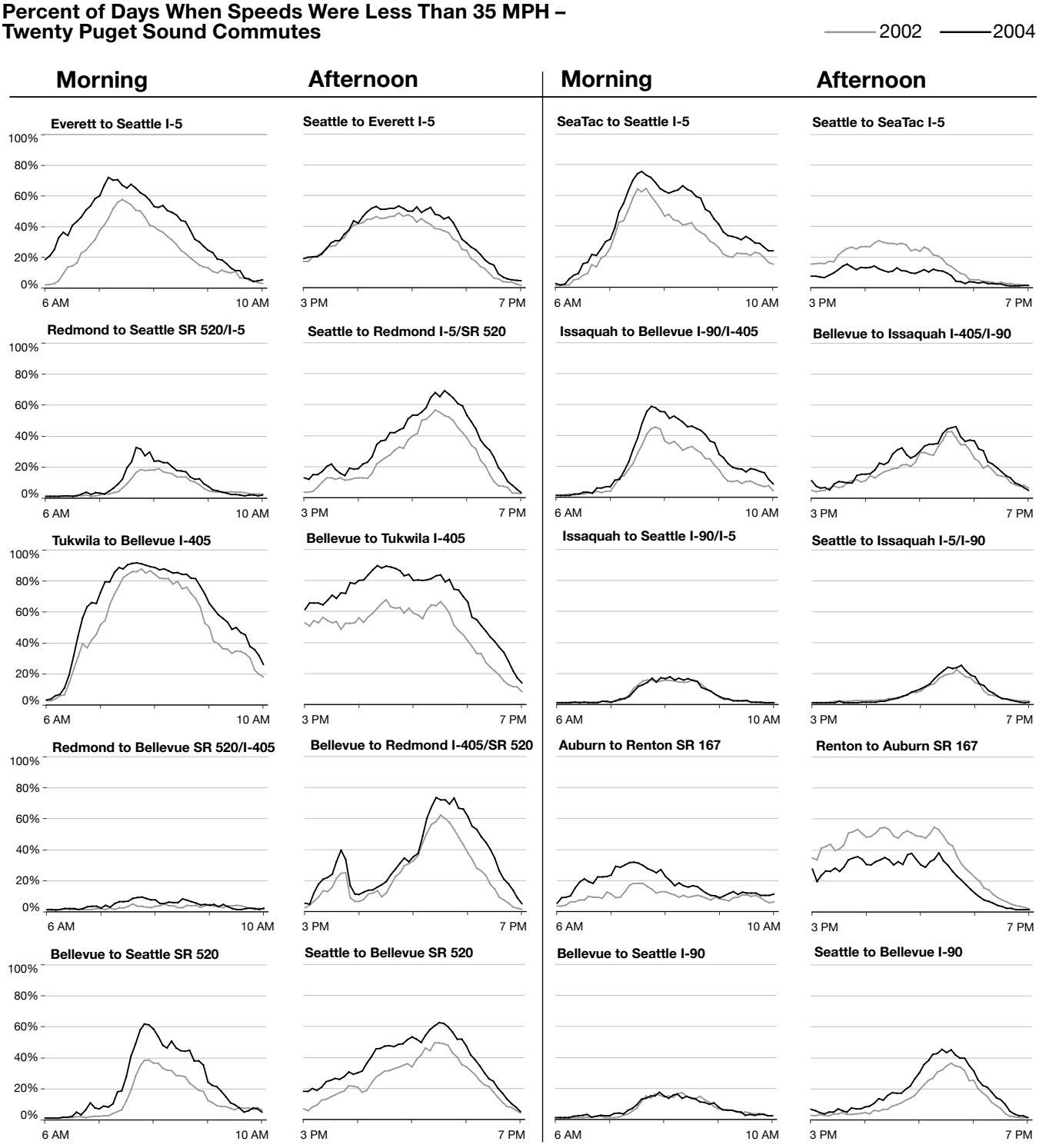


At 4:00 pm in 2002, you had about a 26% chance that traffic would be moving less than 35 mph. In 2004, the situation was better (black line below the gray line); your chance that traffic would be moving slower than 35 mph was about 12%.

Measuring Delay and Congestion: Annual Update

The graphs below reveal whether freeway speed on a given commute route has worsened or improved from 2002 to 2004. Where the black line is above the gray line, 2004 was worse than 2002 and vice versa. The vertical axis measures the percent of days at each time of the segment commute for which speed was less than 35 mph, starting with "0%" at the bottom, ending with "100%" at the top. The time scale represents the hours of the peak commute period.

Percent of Days When Speeds Were Less Than 35 MPH – Twenty Puget Sound Commutes



Measuring Delay and Congestion: Annual Update

Lost Throughput Efficiency

Congestion not only causes delay, it also causes lost efficiency on the roadway system. That is, under congested conditions, even though the road is "full" of cars, they are moving so slowly that fewer vehicles can actually pass any given point on the road. For example, the maximum throughput of vehicles on a freeway, about 2,000 vehicles per lane per hour, occurs at speeds of 45-50 mph.

As demand increases, congestion causes a drop in speeds and the efficiency of the highway is reduced dramatically. When congestion causes drivers to lower their speeds to 30 mph, the throughput (volume of flow) on a freeway may fall from 2,000 vehicles per lane per hour to as low as 700. According to the real-time data recorded on some of the most congested freeways in the Central Puget Sound, less than half the existing capacity is effectively used at a time when it is needed the most. When cars are stuck in congestion, the difference between the intended capacity of the roadway and the actual number of cars that the road is serving is called "lost efficiency," "lost throughput," or "lost capacity". Whatever the term, congestion is causing the freeways to serve fewer people than if the roads could be kept flowing smoothly.

The maps below show average weekday loss of throughput on Central Puget Sound freeways during the most congested periods in 2002 and 2004, respectively. Data was gathered through loop detectors embedded in the roadway. The height of the bars in the graphs indicates percentage of throughput loss: the higher the bars, the higher the lost throughput. The highest spikes depicted on the map are located at the interchange of I-5 and I-90 in Seattle, I-405 in Renton, and I-405 in downtown Bellevue where up to 60% of the throughput was lost during the peak travel period. (That is, the road served only 40% of the vehicles it ought to be able to serve.)

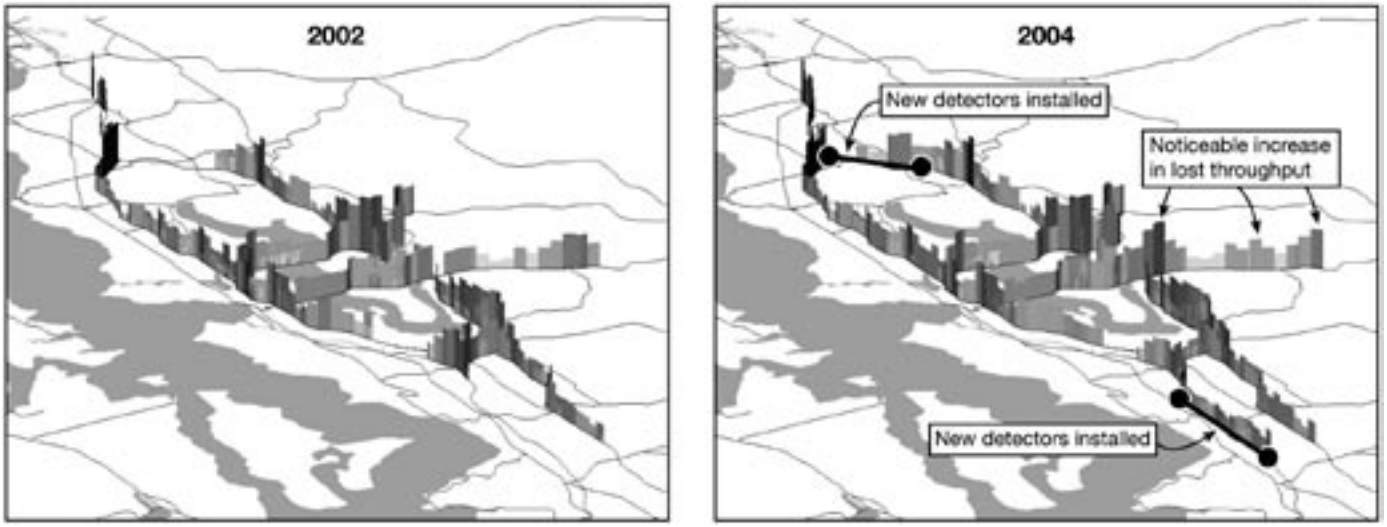
As shown on the maps, from 2002 to 2004, I-90 (east of I-405 and in Issaquah) experienced a noticeable increase in lost throughput. The increased congestion can be attributed to the fast population growth in the east King County area, particularly the new residential development in the Issaquah Plateau. The lost throughput charted on the map in 2004 on I-5 south of SeaTac and I-405 north of Bothell were the results of expanded detection, not necessarily the result of increased congestion.

Analysis of Productivity Loss

The charts on page 63 compare throughput loss between 2002 and 2004 at selected locations on Puget Sound freeways where real-time data were available. I-5 at South 188th Street is observed to have significant gain in throughput during the P.M. peak period due to the completion of the HOV lane in 2003. Throughput at the other two I-5 locations (at the I-90 interchange and NE 103rd Street) were either stable or slightly worse due to increased travel demand and congestion. There was a noticeable increase in throughput loss (both in how bad the loss was during the peak of the commute, and in how long the roadway operated inefficiently) on I-90 at SR 900 in Issaquah due to the increased congestion associated with development activities in and east of that area.

Lost throughput on the SR 520 floating bridge basically remained unchanged from 2002 to 2004.

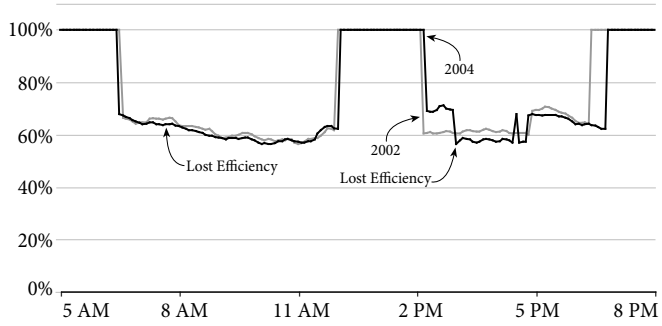
Average Weekday Throughput Loss During Heaviest Congestion for 2002 and 2004



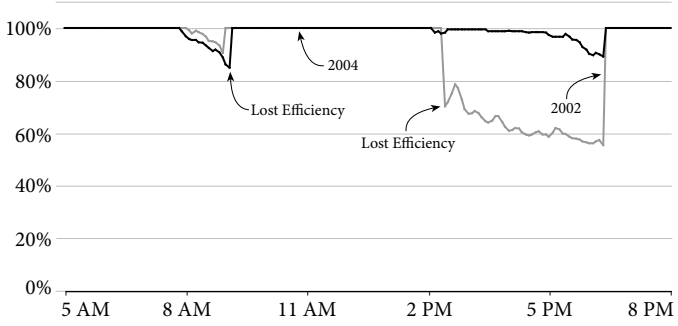
Measuring Delay and Congestion: Annual Update

Lost Efficiency - Lost Throughput

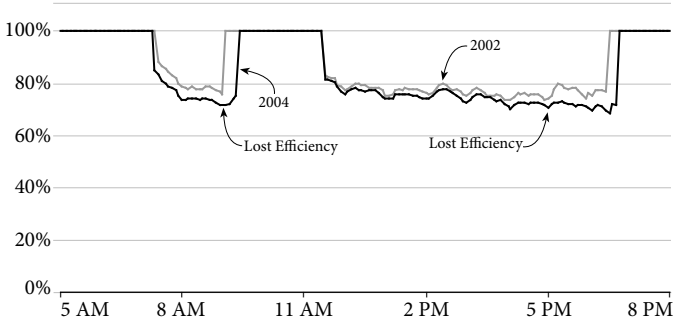
I-5 at I-90



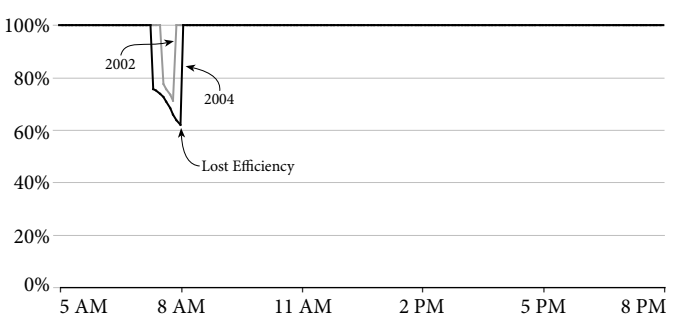
I-5 at S. 188th St. near Sea-Tac



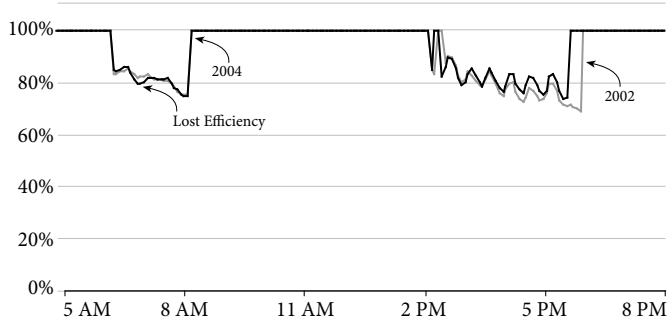
I-5 at NE 103rd St. near Northgate



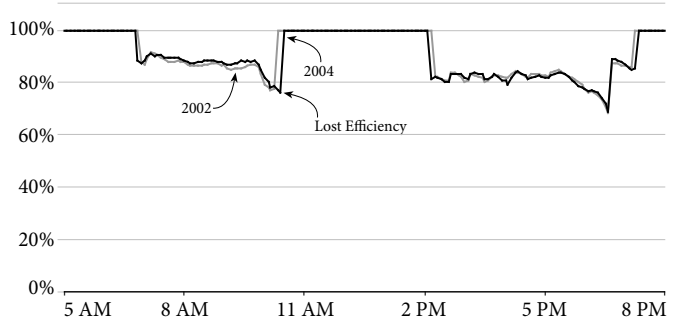
I-90 at SR 900 in Issaquah



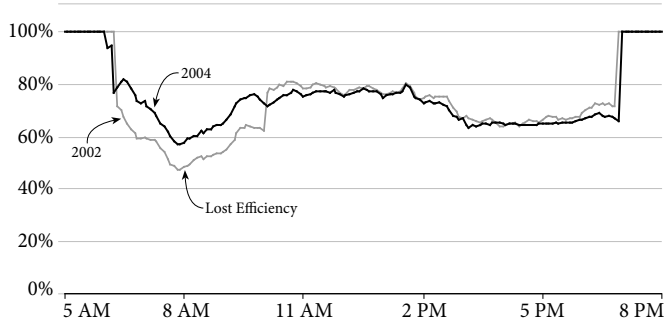
SR 167 South of I-405



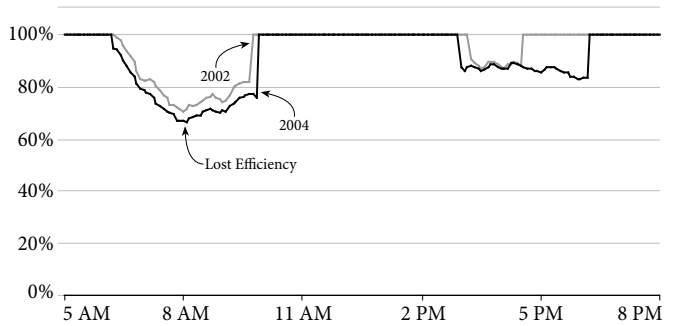
SR 520 Floating Bridge



I-405 at SR 169 in Renton



I-405 at NE 160th St in Kirkland



Measuring Delay and Congestion: Annual Update

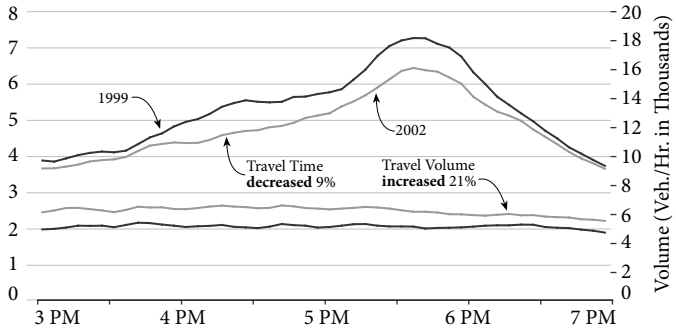
Case Studies - Before and After Results

Case Study 1 - Northbound I-5 Auxiliary Lane between University Street and Mercer Street

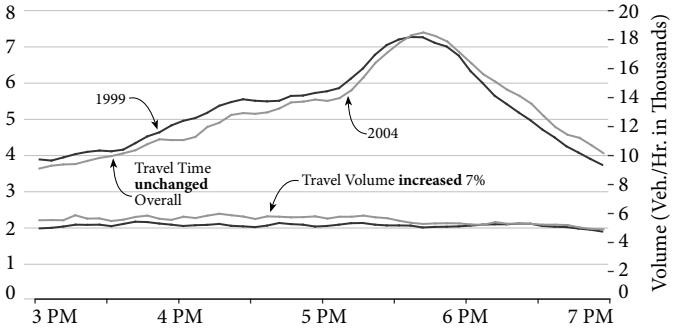
Interstate 5 through downtown Seattle routinely experiences the most severe and extensive traffic congestion in the state. The freeway slices through dense urban development, resulting in a limited number of travel lanes. Partial contributors to heavy northbound congestion are two left-hand ramps: an on-ramp at University Street and an off-ramp approximately ½-mile further north at Mercer Street. Mercer Street serves north downtown and Lake Union as well as the Seattle Center. The off-ramp routinely backed up onto I-5 into the inside travel lane.

In 2001, WSDOT completed construction of an additional northbound freeway lane between University Street and Mercer Street. The result was that motorists entering I-5 from University Street no longer needed to immediately merge into the adjacent congested lane. Most significantly, the newly created lane is designated as "exit only" and serves to store backed up vehicles on the Mercer Street off ramp, and not within a through-travel lane. As noted in the charts to the right, the immediate travel time benefits were significant. In 2002, evening commute travel times on average decreased by 9%, and the freeway efficiency of moving vehicles increased by 21%. By 2004, the average travel time had settled to approximately the same as prior to the project, but almost 7% more vehicles were moving through this segment of I-5 than in 2000. The more recent travel time increase is most likely related to traffic congestion in the vicinity of the I-5/SR 520 interchange.

Northbound I-5/I-90 to Mercer Street
1999 vs. 2002
Travel Time in Minutes



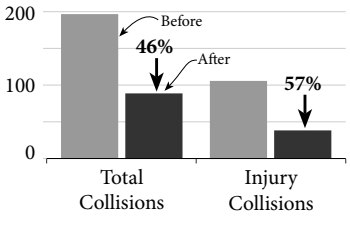
Northbound I-5/I-90 to Mercer Street
1999 vs. 2004
Travel Time in Minutes



Safety Benefits of Improvement

Prior to construction of the additional lane, the northbound approach to the Mercer Street off-ramp did not have an exclusive "exit only" lane. Regular backups on the ramp extended onto the mainline lane, exposing stopped vehicles to higher speed I-5 traffic. Particularly during periods prior to larger Seattle Center events, the backup would extend more then ½-mile south to the portion of freeway covered by the Convention Center. Freeway collisions were quite common. Comparison of the three-year periods prior to and after construction reveals a significant reduction in collisions. Total collisions were reduced by 46% and injury collisions were reduced by 57%.

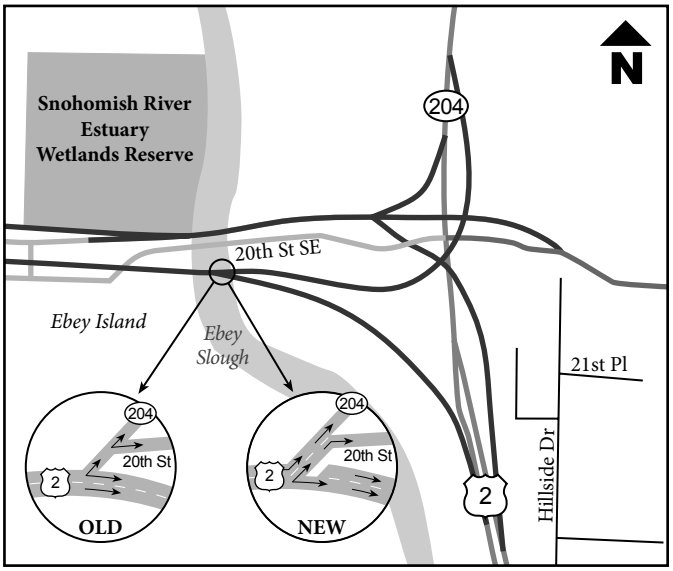
I-5 Project Safety Benefits
Number of Annual Collisions



Case Study 2 – Eastbound U.S. 2 Restripe Project

In April 2002, WSDOT implemented a low-cost striping modification to improve operation of eastbound U.S. 2 approaching SR 204. U.S. 2 connects Everett with north and east Snohomish County, and it carries a growing number of commuters each day. Prior to the project, evening commuters were routinely slowed down when approaching this bottleneck location. The $15,000 project expanded the ramp to SR 204 from one lane to two lanes.

The immediate effect of the change was that traffic congestion was eliminated in the vicinity of this previous eastbound bottleneck. Evening commute travel times were reduced to half of previous times for the approximately 14,000 daily commuters. The improvement has been sustained to the present, even with an almost 10% increase in traffic volume during the past four years.



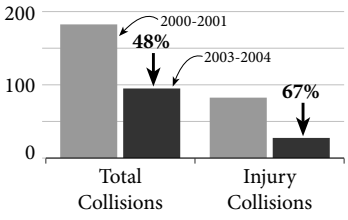
A map of the U.S. 2 Restripe Project area with before and after diagrams inset.

Safety Benefits of Improvement

The previous lane configuration worked for a number of years, but as communities east of Everett have grown, so has the traffic congestion along these segments of U.S. 2 and SR 204.

U.S. 2 Project Safety Benefits

Number of Collisions



A comparison of the two-year periods prior to and after construction reveals a significant reduction in collisions. Total collisions were reduced by 50% and injury collisions were reduced by 67%.

Measuring Delay and Congestion: Annual Update

HOV Lane Performance

High Occupancy Vehicle (HOV) freeway lanes in Washington State are designated lanes for use by vehicles with a driver and at least one passenger. The converted shoulder HOV lane westbound on SR 520 from I-405 to the Evergreen Point Floating bridge is the sole exception – usage requires a driver and at least two passengers. HOV lanes are used to increase the efficiency and productivity of the highway system by maximizing passenger throughput and by maintaining speed and reliability. The HOV system is also intended to provide an incentive for commuters to carpool, vanpool, or transit. Performance goals include usage (vehicle and person throughput) and speed (HOV lanes should average 45 mph or faster speeds at least 90% of the time during the peak hour).

WSDOT continuously evaluates the performance and use of the HOV network system. The University of Washington's Transportation Research Center (TRAC) conducts a regular analysis, also referred to as the HOV Lane Evaluation program, for WSDOT. The TRAC reports include analysis of HOV lane speed, reliability and person throughput.

Like general purpose traffic volumes, HOV lane volumes vary by time of day and location. In general, the more congestion an HOV lane can bypass, the greater the incentive there is to use the HOV lane. HOV volumes are highest during the traditional peak commute periods: 6 A.M. to 9 A.M. and 3 P.M. to 7 P.M. HOV lane vehicle volumes were measured at eight sites in the central Puget Sound area. The person throughput volumes in the graph below were estimated by combining vehicle volumes with per-vehicle occupancy data.

The quality of the user's experience in HOV lanes has degraded slightly in the past two years on most corridors in the region. HOV lanes on both I-5 and I-405 are now struggling to meet the Department's adopted performance standard for speed. Previously, only I-5 lanes frequently fell below the performance standard.

HOV Lane Analysis: Lanes Meeting Expectations

In most cases, specific problem locations are the cause of corridor performance problems. On I-5, the most significant problem locations are near the entrances and exits to the Express Lanes where a substantial amount of lane changing occurs, and southbound near Federal Way as the HOV lane comes to an end.

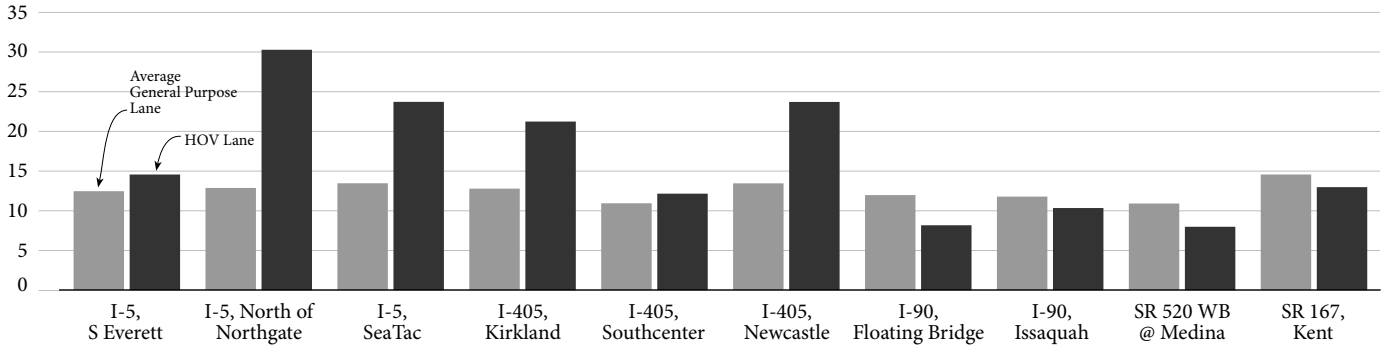
On I-405 southbound, problems occur near Totem Lake, approaching the I-90 Interchange, and near the Kennydale Hill. Northbound, the most significant problems are again in the vicinity of the Kennydale Hill, and then near the Kirkland interchanges. Each of these HOV lane segments is well-utilized, carrying between 1500 and 1700 vehicles during the peak commute hour. With these high traffic volumes, it is not viable to maintain travel speeds that meet the prescribed performance goal of 45 mph or faster.

Most of the HOV lanes that serve recreational movements (e.g., south of Seattle on I-5 southbound, and north of Seattle on I-5 northbound) suffer significant Friday afternoon congestion. HOV volumes during peak periods are already near capacity, and the addition of recreational traffic carrying two

2004 HOV Lane and General Purpose Lane Person Throughput Comparison

Total of A.M. and P.M. Peak Period Volumes

In Thousands



Note: Volumes are for peak period direction only.

Note: WSDOT does not yet have data for the HOV lanes on I-5 south of the Seattle Central Business District.

Source: University of Washington Transportation Research Center (TRAC)

or more people causes the HOV lanes to breakdown, just like the general purpose lanes next to them. Additional analysis is currently underway examining the relative size and significance of these Friday afternoon problems.

HOV Lane Analysis: Lanes Not Meeting Expectations
On four commutes, HOV lane person throughput is not exceeding general purpose lane throughput. The gap has narrowed for two commutes and increased for two commutes since 2002 (see table below).

Change in Person Throughput per Lane During Peak Periods 2002 vs. 2004, Combined Peak Periods: 6-9 am & 3-7 pm

	GP[1] AM	HOV AM	GP[1] PM	HOV PM	GP[1] Total	HOV Total
I-90 Floating Bridge	+24	-91	+188	+488	+212	+397
I-90 Issaquah	+86	+809	+52	+1222	+138	+2031
SR 520 Westbound	-3	-440	+222	-141	+219	-581
SR 167 Kent	+286	+455	+729	-861	+1015	-406

[1] GP = General Purpose

Source: TRAC

I-90 Floating Bridge HOV/Express Lanes. The two-lane HOV/Express facility is underutilized because it has limited access points, including single-lane connections to I-90 mainline on either end. However, HOV person throughput continues to grow during the evening commute hours.

I-90 Issaquah HOV Lanes. The HOV lanes here have lower volume and lower transit usage throughout peak commute periods. The commute is at the outer edges of the HOV system, where carpooling is less prevalent at this time. However, the 2004 person throughput in the HOV lanes has gone up 2000 people per day from the 2002 person throughput, a 25% increase. This can be attributed to population growth in Issaquah and other rapidly-developing Eastside areas.

SR 520 westbound at Medina. This HOV shoulder lane has an operational constraint: the lane is restricted to three-person HOVs and transit for safety reasons. Despite this, the location compares very favorably to adjacent general purpose lanes during each peak commute hour and provides substantial travel time savings for regional transit bus service.

SR 167 in Kent. Between 2002 and 2004, overall person throughput in the HOV lanes has declined while GP lane throughput has increased. This is actually a success story for the corridor. The change is the result of capacity improvements in the *Renton to Auburn, SR 167 afternoon commute* from a restriping project (refer to the table and discussion on pages 59-60), and some additional benefit gained from the HOV Hours of Operation revision (see page 69). Also, a parallel commuter rail route has developed since 2002, shifting some commuters off the freeway.

For the evening commute since 2002, throughput on the two general purpose lanes has increased by a total of 1460 people while the HOV lane throughput decreased by 860 people. The end result is that southbound SR 167 is serving more people (and vehicles) now then in 2002, but still with improved travel times.

HOV User Survey
WSDOT has initiated work on a special survey of HOV lane users. This survey will attempt to answer key questions that cannot be addressed with existing data. Specifically, the survey will attempt to:

1. Quantify the degree to which HOV lanes induce a shift to carpools, vanpools and transit.

2. Ascertain how the HOV lanes are being used during midday (What types of trips are being made? Do most carpools consist of people from the same household?)

Answers to these questions will help WSDOT better quantify benefits of the HOV system, and help in analyzing proposals to modify HOV operating policy. The survey is being undertaken in cooperation with the Washington State Transportation Center (TRAC) and a consultant. Results from the survey should be available early in 2006.

I-5 HOV Lane Closure in Vancouver Provides Important Insights

In August, WSDOT ended the Vancouver HOV lane pilot project and opened the lane to general traffic. The goal of the project, which was not effectively met, was to reduce the number of vehicles on the road during the most traffic-laden part of the day. In this case, the lane was too short and too isolated to provide notable travel time savings and convince commuters to carpool or use buses or vanpools.

Perhaps the most significant lesson coming out of this project is that to maximize the effectiveness of an HOV lane in reducing congestion, it must be part of a larger system designed to manage traffic and increase the flow of vehicles during peak traffic hours. WSDOT has seen success with HOV lane use in the Central Puget Sound, where the entire traffic management system works in a way that encourages travelers to use more efficient options. In Vancouver, however, the HOV lane ended at the bridge across the Columbia River to Oregon,

because Oregon would not agree to continue the HOV lane on their side of the river. This led to bottlenecking at the bridge entrance as general-purpose traffic entered the HOV lane, and a backup in the lane downstream from this bottleneck.

Though the HOV lane pilot project in Vancouver ended, the lessons WSDOT has learned will help inform the agency's work as it begins to explore long-term congestion solutions, including the potential for managed lanes in some form, as part of the Columbia River Crossing project. As transit options improve in the region and improvements to traffic to the south are made, a regional traffic management system will be more effective.

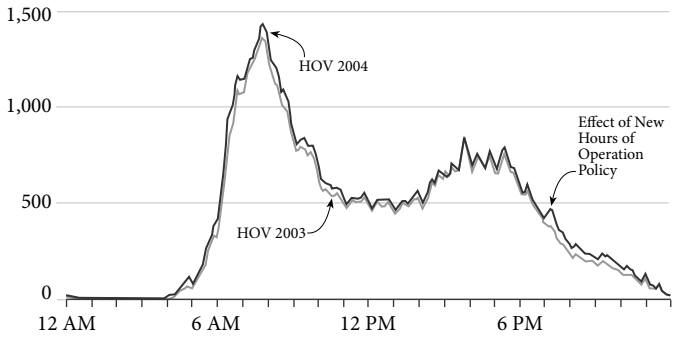
HOV Hours of Operation Demonstration Project

In 2002, the State Transportation Commission directed WSDOT to look into ways of maximizing HOV lane efficiency. WSDOT conducted an *Hours of Operation* study which found unneeded HOV lane capacity after 7:00 pm on I-405 and other eastside highways. In Summer 2003, after completion of $1.2 million in safety improvements required by the FHWA, WSDOT commenced a demonstration project. WSDOT opened the HOV lane on I-405 Southbound at NE 85th St. in Kirkland to general purpose traffic from 7:00 pm to 5:00 am. The graph below shows an overall slight increase in HOV lane traffic, with a small spike at the 7 o'clock hour as a result of the new policy.

WSDOT is close to completing a second-year analysis of these new hours. Preliminary results indicate no negative impacts to transit or general traffic, and a slight improvement.

HOV Lane Volumes I-405 Southbound, Kirkland
(NE 85th St)

Number of Vehicles per Lane per Hour



SR 167 HOT Lanes Pilot Project

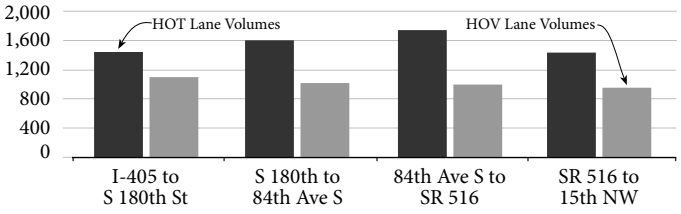
In 2005 the Legislature passed Substitute House Bill 1179, authorizing WSDOT to conduct a four-year pilot project to convert the High Occupancy Vehicle (HOV) lanes on SR 167 into High Occupancy Toll (HOT) lanes. The purpose of the project is to test whether HOT lanes improve the efficiency of the freeway. The SR 167 HOT Lanes Pilot Project will be on the existing nine miles of HOV lanes between Renton and Auburn.

HOT lanes are lanes that are open to vanpools, carpools, transit (free of charge) and toll-paying solo drivers using an electronic toll collection system – no toll booths are necessary. Toll charges will vary depending on the level of congestion on the freeway lanes and are set to ensure that vehicles in the HOT lanes maintain a speed of at least 45 miles per hour for 90% of the peak hour. The intent of this requirement is to maintain speed and reliability for vanpools, carpools and transit. During the course of the pilot project, the Transportation Commission will establish and periodically review toll rates.

WSDOT will evaluate the project to determine effects on freeway efficiency, the ramifications for transit, the feasibility of financing improvements through tolls, and the effects of HOT lanes on freeway users. WSDOT will monitor the HOT lane operations and report annually to the Legislature and the Transportation Commission. The SR 167 HOT Lanes Pilot Project is anticipated to open by the end of 2008. Timing of the opening of the HOT Lanes pilot project will partially depend on the schedule for other improvement projects that received funding from the Legislature this year.

SR 167 HOT Lanes - Forecasted Performance

Number of Vehicles per Hour per Lane



What Does the Public Think of HOT Lanes?

38% of the users think that paying a toll is a good idea
38% think it will provide a faster trip when they really need it
30% need to save 11 to 15 minutes to pay for access to the lanes
36% are willing to pay $1.00 - $2.00 to use a HOT lane

Source: 2005 WSDOT survey of SR 167 users

Measuring Delay and Congestion: Annual Update

Even More Work on Measuring and Understanding Recurrent and Non-recurrent Congestion

The Washington State Transportation Center (TRAC) working together with WSDOT, is continuing to investigate traffic congestion and its causes in the Puget Sound region. A second phase of this three-part research study was completed in July 2005.[1] This effort examined the effects of the following on non-recurring traffic congestion: lane blocking incidents, non lane blocking incidents, special events, and weather. The analysis examined performance between January and April 2003 for three corridors: I-90, SR 520, and the southern half of I-405. One major finding of the study was that considerable congestion exists that cannot be directly associated with any of the factors noted above, nor the existence of "routine" traffic volumes.

The findings of the study showed that many of the congestion effects of traffic disruptions (accidents, incidents, special events) can extend to locations far removed from the actual cause of the disruption. For example, a special event such as a Sonics game can cause increases in traffic that are miles from the I-5 ramps that directly serve the Key Arena. Increased traffic volumes caused in part by these events create earlier and longer congestion periods at traditional freeway bottlenecks (such as the approach to the Evergreen Point Floating Bridge). The cause and effect tracking methods developed in Phases 1 and 2 of the research are not effective in readily associating such congestion with its cause; the reasons for this include the geographical separation of this congestion from its source, the complexity of the freeway network, and the movement of other traffic between the two.

A less obvious finding was the fact that lane blocking incidents can cause multiple backups. The primary, "obvious" back up is the one located directly behind the incident scene. However, after the incident scene has been cleared, the wave of traffic released from the existing backup can create new congestion downstream of the incident. Thus a single accident frequently forms two or more separate congestion locations: the primary one directly behind the incident, and secondary ones downstream of the cleared incident. This secondary congestion can occur when the traffic released from the incident is dense enough and travels into bottleneck locations that combine vehicles from the incident with those from downstream onramps. These primary and secondary congestion locations can exist simultaneously.

Recurring congestion is daily congestion due to too many vehicles routinely using the freeway at the same time, e.g. to travel to and from work. Non-recurring congestion is due to the occurance of incidents, special events, and weather. According to TRAC's previous research, 40% - 70% of traffic delay in the Puget Sound region is caused by non-recurring congestion incidents.

Another finding of the study was that the effect of light rain on traffic is quite variable. While average delays increased slightly on days when rain fell, those delays were frequently not statistically significant. In addition, rain by itself is not a good predictor of major delays. The data set included several days when rain fell but little congestion was measured. The data set also included several days when rain fell and delays were extremely long. Continuing research into the causes of congestion will include a more detailed analysis of how rain contributes to other factors that contribute to delay.

Considerable work remains to be done to understand the complex interaction of all of the factors that affect traffic performance. Improving this understanding is key to developing cost-effective strategies for keeping the traffic on our roadways flowing as freely as possible.

For more information on the previous study, refer to the *Gray Notebook* for the quarter ending September 30, 2004. It can be found online at www.wsdot.wa.gov/accountability/archives/graynotebookSept-04.pdf#page=59.

[1] Measurement of Recurring and Non-Recurring Congestion: Phase 2. WA-RD 619.1. Available on the TRAC website at depts.washington.edu/trac/bulkdisk/pdf/619.1.pdf.

Measuring Delay and Congestion: Annual Update

Congestion Monitoring in Tacoma, Spokane, Vancouver, and Bellingham

The Puget Sound Flow Map found on WSDOT's website is well known throughout the state and is WSDOT's most accessed page. Behind the map are camera coverage and traffic data collection systems that provide real-time monitoring and management of the freeway system. The installations typically utilize loop detectors, but in some situations video or radar detection systems are deployed. The agency has expanded this technology to include Tacoma, Spokane, Vancouver, and Bellingham. WSDOT also operates Traffic Management Centers (TMC) within each of these areas to provide centralized coordination for incident management within these urban areas.

Tacoma
WSDOT's Olympic Region is responsible for freeway operations within the greater Tacoma area. The current congestion management system coverage includes data collection stations along 3.5 miles of I-5 and two miles of SR 16. The Tacoma Flow Map currently only shows the I-5 segment.

Freeway expansion projects are well underway on SR 16 and I-5 that include construction of additional data stations. By 2007, system coverage will extend six miles along SR 16 between I-5 and Gig Harbor. By the following year, another seven miles of I-5 coverage will be added, completing the system from SR 512 (including a short segment of SR 512) to the King/Pierce county line.

Spokane
WSDOT's Eastern Region, in partnership with Spokane County, Spokane Regional Transportation Council, City of Spokane, City of Spokane Valley and Spokane Transit Authority, is deploying a regional data warehouse to collect and store traffic volume, aggregated speed and congestion information on roadways in the Spokane area. The system, known as The Performance Measurement System (PeMS), is described on page 72. The Spokane Flow Map is planned to be added to the WSDOT website in early 2006.

PeMS has been collecting data from nearly 10 miles of I-90 since February 2005. Later this year, an additional four miles of freeway system coverage will be added in conjunction with the opening of a third I-90 lane between Argonne Road and Sullivan Road. The expanded system will become immediately useful in assessing traffic volume increases related to additional roadway capacity in Spokane Valley.

Vancouver
Similar to the approach in Spokane, WSDOT's Southwest Region is also deploying a regional data warehouse. The deployment encompasses the Vancouver/Portland metropolitan area and is a partnership between WSDOT, Oregon Department of Transportation, SW Washington Region Transportation Council, City of Vancouver, Clark County, City of Portland and Portland State University. The Vancouver/Portland Flow Map will be activated on WSDOT's website in late November 2005.

On the Washington side, the system has been collecting data since 2003 on three miles of I-5 and five miles of SR 14. In the near term, system coverage will be expanded on I-5 between Main Street and the I-5/I-205 interchange and along I-205 between the state border and the 83rd interchange. These system additions provide another nine miles of coverage and should be active by late 2006.

Bellingham to the Canadian Border
WSDOT's Northwest Region began expansion of the data monitoring/collection system into Bellingham in 2003. Subsequently a satellite Traffic Management Center was established in late 2004. Current freeway data coverage spans a three-mile stretch of I-5.

Between Spring 2004 and 2005, I-5 has experienced an almost 8% growth in the Bellingham area (average March-May weekday volume at Meridian Street). In the near term, WSDOT plans to expand the Bellingham system by adding several additional data stations.

Canadian Border Crossings
WSDOT recently implemented a system that collects data for calculating border crossing wait times and conveys the information to travelers via WSDOT's website and on-road Variable Message Signs (VMS). Border crossing times and Nexus lane status information were first posted on Variable Message Signs in February 2005. Since then, WSDOT has received positive feedback from drivers. Currently the I-5 border wait time system is off-line awaiting completion of border crossing construction work. The wait time system should be active once again by the end of 2005. Additional loop installations are planned in the near future to expand the I-5 system further south from the border.

Measuring Delay and Congestion: Annual Update

Construction is also scheduled to begin in Spring of 2006 for system deployment on SR 543 (truck crossing) that includes loop detectors and video surveillance. Upon completion of this project, automated wait times for both the I-5 and SR 543 crossings will be broadcast on the Variable Message Sign south of the I-5 / SR 543 interchange. Similar systems are planned for the SR 9 border crossing

Future Plans

The next Congestion Report will contain an update on these cities with examples of congestion measurements related to construction projects, operational modifications, and other factors. For example, Spokane will be resurfacing I-90 through the downtown area during Summer of 2006. WSDOT is planning to have some excellent before and after information associated with the project.

Real-Time Data from the Performance Measurement System (PeMS) in Spokane

The Performance Measurement System (PeMS), developed at UC Berkley, was configured and installed at the Spokane Regional TMC (SRTMC) by Siemens ITS in early 2005. The SRTMC is a partnership that includes the City of Spokane, City of Spokane Valley, Spokane Valley, the Spokane Regional Transportation Council, Spokane Transit Authority and WSDOT.

Funded by a Federal Highway demonstration project earmark, PeMS provides the region with a near real-time data warehouse, accessible to all the partnership agencies though a regional intranet connection. The regional data warehouse not only makes all data collected from the roadway systems available to all the agencies, it becomes available within minutes. The program provides a huge array of options to access, analyze, and display the data.

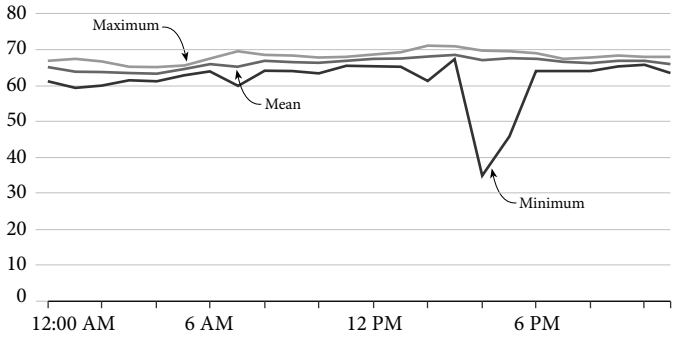
The figure to the right is an example of a custom display available through PeMS. The bottom line shows the impact of a traffic accident that occurred on Friday afternoon, October 28, westbound on I-90, just west of Custer Street in Spokane. The area experienced some rainfall, followed by a short period of sunlight. A four-car collision resulted in minor injuries at about 4:20 p.m. IRT and emergency personnel arrived and closed the right lane for about 30 minutes. Data collected at the time of the incident is compared to monthly mean and maximum speeds. It is easy to see the location, speed reduction and the duration of the event.

Another event occurred on eastbound I-90 between Altamont and Freya streets in Spokane at 5:33 p.m on July 5th. The scene cleared 30 minutes later. Data collected at the time of the incident is compared to normal conditions two weeks later.

PeMS also provides the ability to easily estimate the impact of a planned lane closure, allowing impacts to be minimized, or in the case of unavoidable work, communicate the level of expected delays to the public. The Eastern Region used data from this system to develop temporary lane configuration plans for a major project to resurface I-90 through downtown Spokane in the Summers of 2006 and 2007. The new system will be invaluable for effective planning as well as traffic management during construction of this high impact project.

Performance Measurement System (PeMS) Spokane Example

Speed in mph



Travel Information: Quarterly Update

The 511 telephone call up system provides a variety of information affecting travel. This information includes updates on current traffic conditions, incidents, construction activities, mountain pass conditions, and weather conditions. Travelers can also obtain information about ferry, transit, airline, and railroad service. Last January, the existing 1-800-695-ROAD and 206-DOT-HIWY numbers were directly routed to the 511 System, expediting information retrieval. This enhancement made 511 more efficient and consistent by bringing several information sources together into one system for the public's use.

Overall Trend and Total Call Volume

Calls to Travel Information begin to increase after October each year, and the monthly volume reaches its peak around December or January when mountain pass snow conditions are on travelers' minds. Prior to the winter months, the total number of calls to Travel Information is lower than in the actual winter months themselves. During the third quarter (July 1 through September 30) of 2005, there were 145,864 calls - 28.4% more than the total from the third quarter of last year. On September 11, 2005, call volumes increased 62.1% compared to September 2004. As shown in the chart at the top right, a single-day spike of 11,450 calls came in. The increase was due to calls received seeking road condition information on the day and the weekend after large rockslides at Snoqualmie Pass (see sidebar below).

The demand for Travel Information services is also great for other "unexpected" events, such as the severe snow storm this past January 17, when 29,568 calls were received while the average daily call volume for January was 7,659.

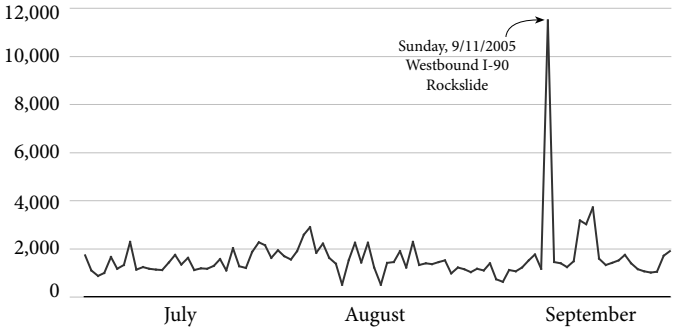
Call Volumes Increase with I-90 Rockslide at Snoqualmie Pass

A rockslide occurred on Snoqualmie Pass in the early morning hours of September 11. The rockslide occurred on westbound I-90 at Snoqualmie Pass and claimed the lives of three individuals. The next day another large rock fell on the road; fortunately no one was injured. As a result of traffic restrictions on the pass, call volumes spiked. The average call volumes this time of year is 1,585 calls per day. On that day, the number of calls soared to 11,450 calls.

WSDOT responded to the call volumes and demands by informing the public of closures using 5-1-1 Travel Information Systems (phone), TV, radio, press releases (print), Internet, Highway Advisory Radio (HAR), and Variable Message Signs (VMS). For more information see- www.wsdot.wa.gov/Projects/I90/Rockslides/

Travel Information Service: Daily Call Volume

July 1, 2005 - September 30, 2005



On the WEB

WSDOT's travel information website provides real-time road and weather information to the traveling public. On-line information that the public can access include roadway incidents, construction event updates, mountin pass information, and weather information.

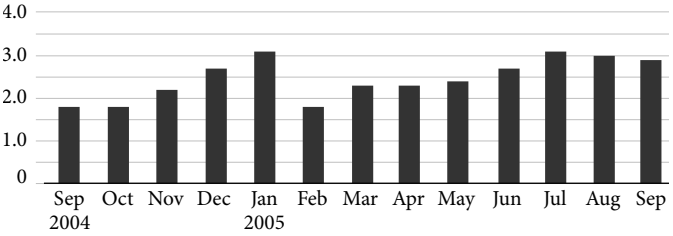
Web Usage Up

Web use of travel information for September, 2005 has increased 62% since last year's total of 1.8 million page views per day. For the months of July through September, the number of page views is up an average of 46% over the same period last year. The highest month on record was January 2004 with 3.4 million page views per day. The lowest month on record was January 2003 with .6 million page views per day. The highest day during this quarter was July 1, 2005 with 5.4 million page views, as people planned their holiday weekend.

Website Usage

Average Daily Page Views: September 2004 to September 2005

In Millions



Incident Response: Quarterly Update

Program Trends

During the third quarter of 2005, the total number of incidents responded to was at a summertime peak of 15,881—slightly higher than the level from the previous quarter (a 3% increase). Overall average clearance time did not change—17 minutes.

Type of Responses

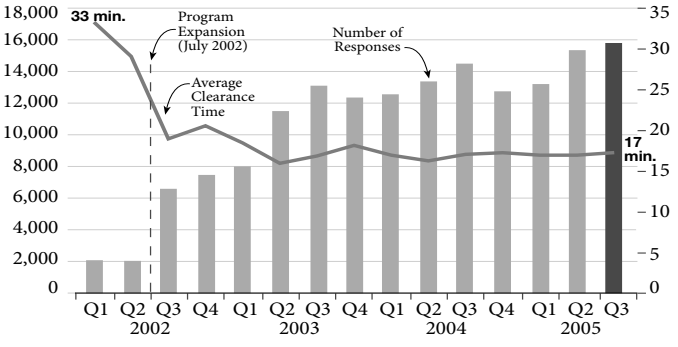
This notable increase was due to a rise in major incidents lasting 90 minutes or longer. The number increased by 25% from the previous quarter level of 211 major incidents to 264. Examination of major incidents showed there was an increased number of responses to fatality-involved crashes.

As shown in the pie chart at the right, 17% (52) of the 90+ minute-incident category in the third quarter were for fatal collisions as compared to 9% (23) in the second quarter of 2005. Most other incident types remained proportionately unchanged within each clearance time category. The sharp increase is clearly observable as a spike in the third quarter in the Fatality Collision Trend bar chart below right.

The two most important determinants to the program total are: 1) the actual number of incidents occurring on roadways; and 2) changes in program resources (e.g., staffing levels, shift hours and roving locations). Because major incidents are responded to from calls coming in administrative changes should not greatly affect the responses to major incidents.

Number of Responses and Overall Average Clearance Time

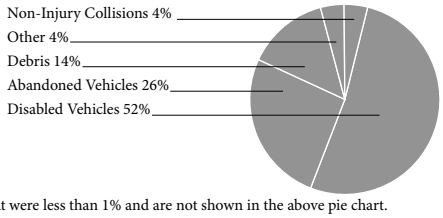
January 2002 - September 2005



Source: WSDOT Incident Tracking System

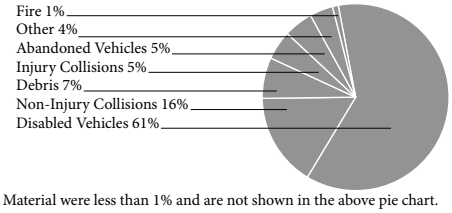
Note: Program-wide data is available since January 2002. Prior to Q3 of 2003, number of responses by IRT are shown. From Q3-2003, responses by Registered Tow Truck Operators and WSP Cadets have been reported in the total.

Incidents Lasting Less Than 15 Minutes (9,887)



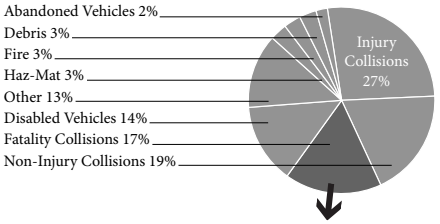
Injury Collisions, Fire and Haz-Mat were less than 1% and are not shown in the above pie chart.

Incidents Lasting 15 to 90 Minutes (5,730)



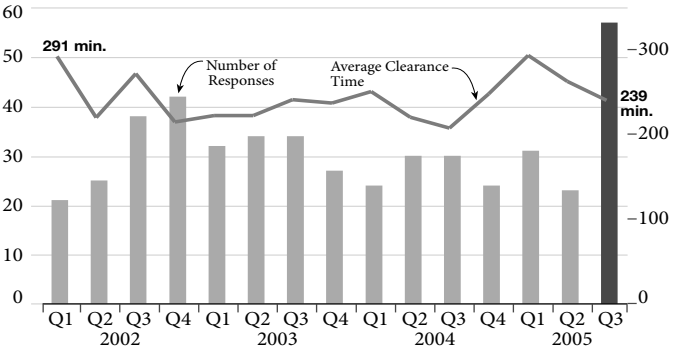
Fatality Collisions and Hazardous Material were less than 1% and are not shown in the above pie chart.

Incidents Lasting 90 Minutes and Longer (264)



Number of Responses and Average Clearance Times for Fatality Collisions

January 2002 - September 2005



Source: WSDOT Incident Response Tracking System

Incident Response Types - July through September 2005

	July	August	September
Fatality Collisions	22	16	20
Injury Collisions	146	130	132
Non-Injury Collisions	485	410	492
Disabled Vehicles	2936	3082	2732
Abandoned Vehicles	873	974	971
Debris	602	664	580
Fire	34	41	23
Hazardous Materials	9	9	7
Other	219	217	197

Service Actions Taken for Non-Collision

July - September 2005

	July	August	September
Traffic Control	590	619	436
Provided Fuel	401	457	403
Changed Flat Tire	361	361	335
Minor Repair	233	269	223
Pushed Vehicle	222	270	202
Towed Vehicle	49	57	66
Cleared Debris	471	508	434

Incident Response: Quarterly Update

IR Teams Statewide Provide Enhanced Traffic Flow Management in Construction Zones

Summer months are busy for roadway work and construction. Minimizing interruptions to traffic flow is a challenge. In the third quarter of 2005, Incident Response teams statewide responded to 458 work zone incidents — a 67% increase from the second quarter of 275 responses. More than half or 52% of the responses within work zones were provided in the Tacoma-Lakewood area—along I-5, SR 16, and SR 512—and 19% (87) were along I-90 in Spokane.

Construction zone emphasis activities are shown as spikes in the bar charts at right for the SR16 and I-5 corridors.

During the third quarter, in areas outside construction zones, most core roving coverage areas showed a continuing summertime trend from the second quarter segments, however, showed a notable departure from the trend. In the Spokane area on I-90 (milepost 270-294, a 24-mile segment), there was an increase of 25% (256) in responses. Between Kent and Renton, there was a significant decrease in responses of -32%, or (72 fewer) on SR 167 (milepost 18-27, a 9-mile segment).

Construction Zone Traffic Management Highlights - Olympic Region

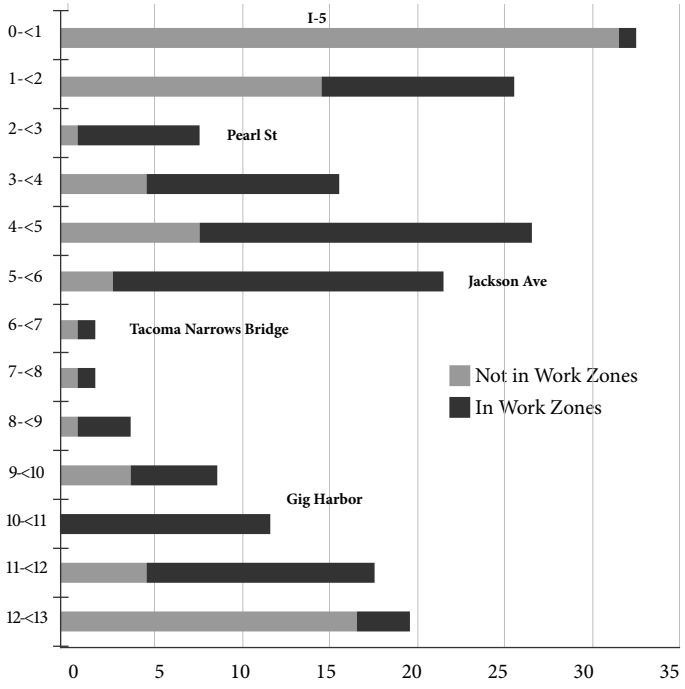
In August and September, the Olympic Region Incident Response (IR) team worked with project engineers to increase their work zone traffic management. This covered construction projects through the Tacoma and Lakewood areas that involved multiple lane closures August 20th and 21st on I-5, and narrowed and shifted lanes on southbound I-5 in the 56th to 96th street project.

In the Tacoma/Lakewood area projects, IR provided roving coverage to all of the suggested detour routes (including SR 16, SR 167 and SR 512). During the first two weeks of the Tacoma Dome Project, IR set special roving hours including peak periods during weekends. Later, IR continued roving during morning hours and evening peak commute hours.

One of the key goals of the program is to quickly detect and remove anything that blocks or restricts lanes in the construction zone. Most blocking lane incidents were moved to roadway shoulders within five minutes. IR Team members got vehicles back underway or arranged for tow services to remove vehicles from the shoulders. They also called in to the Traffic Management Center (TMC) with up-to-the-minute information on traffic conditions. This information was then immediately transmitted back to the public by means of the Internet, 511 Travel Information, Highway Advisory Radios (HAR's) and Variable Message Signs (VMS's). A total of 237 responses were provided within work zones during the first ten-day period. Traffic backups were kept at a minimum allowing for a difficult construction program to be completed on time.

SR 16 Both Directions

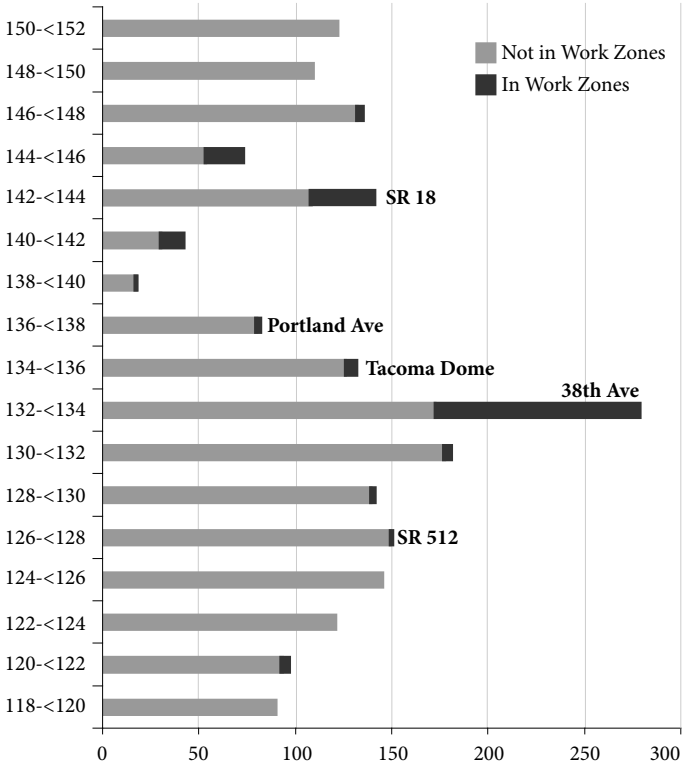
Number of Responses



Incident Response: Quarterly Update

I-5 Both Directions

Number of Responses

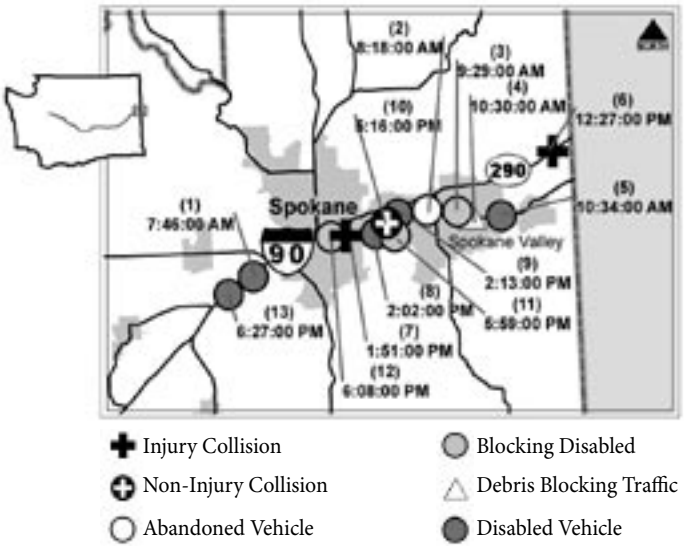


A Day in the Life…

Monday, August 1, 2005 — Along I-90 in the Spokane area, thousands of trucks support local and long distance freight and goods movement. Thousands of commuters in the Spokane area also depend on I-90 to get to and from work. The core area of patrol for the Incident Response Program in the Eastern Region is along I-90 from milepost 270 to 291.7.

On August 1st, the IR program in the Eastern Region responded to 13 incidents. The majority of these incidents were non-collision incidents that involved disabled vehicles; these were cleared in an average of 6.5 minutes. IR also responded to three collisions in the Spokane area by providing traffic control, variable messages signs and assistance in clearing debris. Collisions required more time with an average clearance time of 84 minutes. The insert shows the incidents by location, type and time.

WSDOT Eastern Region Incident Response August 1, 2005



Highway Maintenance

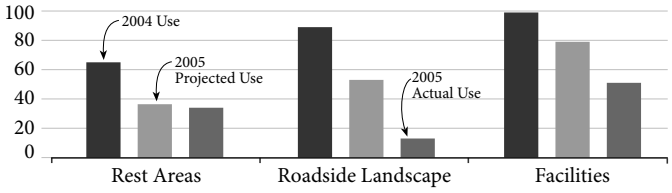
WSDOT Water Conservation During Summer 2005

The warm winter of 2004-05 brought low snowfall and left low snow pack levels in the mountains. The situation prompted Governor Gregoire to issue a statewide Drought Emergency in March 2005. In response, WSDOT assessed water usage and deployed a water conservation plan during the summer of 2005. By cutting back water use, WSDOT projected an overall water savings of 28% (a 94 million gallon reduction) compared to water use during 2004. Results in the three major water usage areas where water was conserved showed significant savings.

Highway Rest Areas: In 2004, 65 million gallons of water were used at rest areas around the state during the "busy water-use" time period of April through September. The Drought Plan earlier identified a 2004 usage of 57 million gallons but improvements in the rest area water use data collection equipment has led to the revised, more accurate number of 65 million gallons. By cutting back on watering lawns, a 44% reduction in water use was targeted. Subsequent water usage was projected at 36.4 million gallons at rest areas in 2005. Actual water use was 34 million gallons, a reduction of 48% from last year's use. Anticipating some rest area visitor shock upon the sight of once-green lawns turning brown, WSDOT placed signs explaining water conservation measures at rest areas.

WSDOT 2005 Drought Response Plan Results

(Millions of Gallons)



Source: WSDOT Maintenance Office

Highway Roadside Landscape: Water usage for roadside landscaping and irrigation systems was cut back to the absolute minimum, employing the same water conservation philosophy used at WSDOT's rest areas. Irrigation systems were not turned completely off but watering was cut back to the minimum needed to keep landscape plants in a healthy condition. In 2004, 89 million gallons of water was used to irrigate roadside landscaped areas. By reducing this irrigation, projected use in 2005 was 53 million gallons. Actual use through August 2005 was 13 million gallons, an 85% reduction. Anticipating that irrigation is reduced in September and generally stopped in October through December, water savings appear to be well ahead of the projection.

WSDOT Facilities: A wide variety of water usage takes place at WSDOT facilities. Water is used for washing WSDOT motor vehicles, irrigation for watering lawns and landscaped areas around buildings, and domestic water use for restroom facilities. In 2004, water use at WSDOT facilities totaled 99 million gallons. By cutting back on truck and car washing as well as lawn irrigation, projected water use in 2005 was 79 million gallons. Actual use through August 2005 was 51 million gallons - well on track with the year-end goal.

Truck washing was one area in which water use was cut back.

Wireless Internet Access at Rest Areas to Come

Wireless access to the Internet (Wi-Fi) for travelers stopping at safety rest areas along I-5 and I-90 in Washington State is closer to becoming a reality. WSDOT has issued a Request for Proposals and has met with approximately 30 potential vendors. It is anticipated that a vendor will be selected in mid-December and the first connections will be available by Spring 2006. When travelers pull into a rest area, all they'll have to do to access Wi-Fi is turn on their wireless-enabled computer, PDA, or cell phone and log on to the internet.

All WSDOT web page services (i.e. traveler information) will be provided at no cost to users. A subscriber cost will be incurred for surfing the web or using e-mail. It is anticipated that truckers will be heavy initial users of the service. On any given night, there are about 750 commercial trucks parked at WSDOT's rest areas and approximately 275,000 trucks per year stop at these rest areas during the daytime. Similar programs in other states have shown that the traveling public takes advantage of Wi-Fi at rest stops to check highway conditions, status of road construction projects, and travel information services.

Highway Safety

Corridor Safety Program

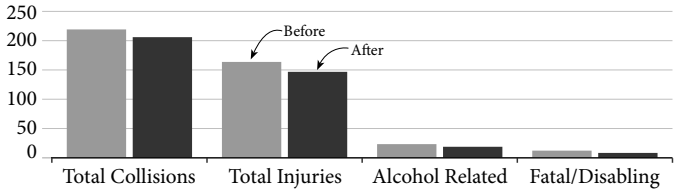
The Corridor Safety Program is the effort of WSDOT and the Washington Traffic Safety Commission, targeting specifically identified corridors (in length from 5 to 40 miles) to achieve reductions in collisions using low-cost, near-term solutions. Since 1991, 20 projects have been completed in state highway corridors, and many others are now underway, including several on city and county roads due to a program expansion in 2003.

Each project emphasizes local coordination and citizen/civic participation in engineering, education, enforcement, and emergency medical service improvements. Almost every project includes active participation by the Washington State Patrol.

Cooperating for a Safer Highway 101: A typical Corridor Safety Project now underway is on U.S. 101 between Port Angeles and Sequim in Clallam County. This project included significant participation at the local level. The City of Port Angeles has played a major role in the project, since the U.S. 101 corridor includes a high volume one-way couplet through downtown Port Angeles. Clallam County is playing a big role in the project, with the Clallam County sheriff as the project coordinator. The engineering improvements completed on this project by the WSDOT Olympic Region are similar to fixes made on other projects around the state. For example, new signage has been added in the project area. New striping has allowed for new channelization at key intersections and centerline rumble strips have been installed throughout the 2-lane portions of the 32-mile corridor.

Before and after safety records kept for every completed project, indicate that measurable safety improvements were obtained as a result of highway safety measures put into place. The aggregate results for the twenty completed projects show a 6% reduction in the average number of collisions per year from 219 to 206. Total average number of injuries per year decreased 10% from 164 to 147. Similarly a 19% reduction occurred in the total average number of alcohol-related collisions from 23 to 19 and a 32% reduction in fatal/disabling collisions from 12 to 8.

Corridor Safety Program Before and After Study
Average Number of Collisions per Year

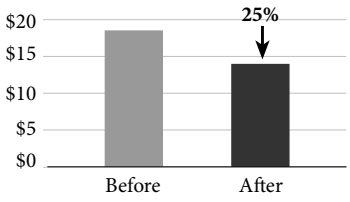


Source Information: WSDOT Corridor Program

New pavement markings installed on U.S. 101 Corridor Safety Project.

These improvements in roadway safety translate into dollar benefits to Washington citizens easily amounting to more than $4.5 million per year for a typical project. Before highway safety corridor improvements were put in place, societal costs from collisions taking place at these corridors amounted to $18.5 million per year for a typical project. As a direct result of completing the 20 highway safety corridor projects, a 25% reduction in societal costs to $13.9 million per year per project was achieved. The following Corridors are currently active in the program:

Corridor Safety Program: Average Societal Costs
Per Year for a Typical Project
Dollars in Millions



Source Information: WSDOT Corridor Program

- SR 14 in Skamania County
- Vantage & Kittitas Highways in Kittitas County
- Fourth Plain Blvd in Vancouver
- SR 26 in Adams County
- U.S. 101 in Clallam County
- SR 291 in Spokane & Spokane County
- SR 7 in Pierce County
- SR 20 in Skagit County
- Rainier Ave in Seattle

Corridor Safety Project drunk driving awareness sign installed on U.S. 97A.

Commute Options: Annual Update

2003 - 2005 CTR Performance Grant Program

Creating Cost Effective Strategies to Reduce Drive-Alone Commute Vehicle Trips

The Washington State Legislature created the Commute Trip Reduction Performance Grant Program in 2003 to encourage entrepreneurs, private companies, transit system, cities, and non-profit organizations to provide services to employees that result in fewer vehicle trips arriving at worksites. The program paid the grantees for the projected number of trips they reduced. Grant amounts between $56 and $460 per daily trip reduced over the course of one year were awarded. Grantees were also eligible to receive up to 50% of the award to cover start-up costs. The balance of the award was based on project performance.

The geographic distribution of projects awarded were comprised of 11 (33.3%) in the Puget Sound Region, 11 (33.3%) areas in Western Washington outside the Puget Sound Region, and 11 (33.3%) elsewhere in the state.

Project Awards

Thirty-three grants were awarded on a competitive basis to private employers, public agencies, nonprofit organizations, developers, and property managers. These were organizations which provided financial incentives to their own or other employees for using an alternative to drive-alone commuting, and which reduce the number of vehicle trips and miles traveled during the morning commute.

Program Successes and Areas for Improvement

One of the keys to success was offering financial incentives to employees. Twelve of the 14 grantees which exceeded their goal used financial incentives to increase participation in their project. They found that once a participant used a commute alternative, they were more inclined to continue using the alternative, even after the incentives ran out.

A review committee examined areas for improvement within the program and addressed these areas. For details on the improvement effort, and the new Trip Reduction Performance Program, please visit WSDOT's website at: www.wsdot.wa.gov/tdm/program_summaries/trpp_intro.cfm.

Project Case Study

City of Redmond's Trip Reduction Incentive Project

The City of Redmond partnered with King County Metro and the Greater Redmond Transportation Management Area (TMA) to provide performance based incentives to employers for reducing the number of vehicle trips to their Redmond worksites, as well as for maintaining those trip reductions into a second year.

Project Results

- Award amount - $123,000 (not including bonus funds)
- Projected number of daily trips reduced – 300
- Actual number of daily trips reduced – 1,032
- Actual number of annual trips reduced – 258,000 (1032 x 250 days[1]= 258,000)
- Amount per trip is $143 calculated as follows: Award amount ($147,600) / # of trips reduced (1,032)
- Total grant amount including bonus[2] - $147,600

[1] 250 days includes Mondays and Fridays, excludes Saturdays, Sundays and Holidays

[2] Bonus is the amount paid (up to 120% of award amount based on the number of trips that exceeded the goal)

Marketing strategy used by the City of Redmond for the Trip Reduction Incentive Project as a part of WSDOT's CTR Performance Grant Program

CTR Performance Grant Program Results

Of the 33 projects selected, 29 projects were completed:

- 14 exceeded their goal to reduce work site commute trips
- 7 made at least 50% of their goal
- 4 did not meet 50% of their goal
- 4 showed an increase in vehicle trips

The program reduced an actual total of 5,150 daily trips or an annual total of 1,287,500 vehicle trips for the year calculated as (5,150 x 250 days = 1,287,500). The annualized trip cost was $241.91. The cost of each individual trip was 97 cents per trip (obtained by calculating the annualized trip cost of $241.91 per 250 days).

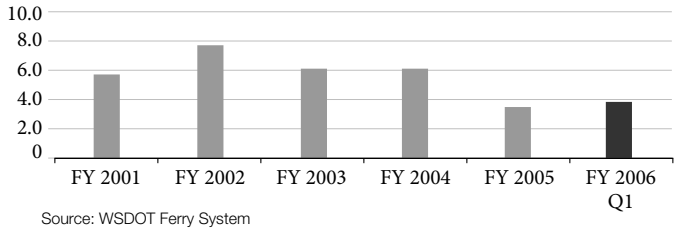
The overall program goal was exceeded by 41%. The total award amount paid was $1,084,217.10. The total bonus amount paid was $161,508.20

Washington State Ferries: Quarterly Update

Customer Feedback

WSDOT's Washington State Ferry System (WSF) delivered approximately 44,000 trips and carried 7.1 million riders this quarter and received 340 complaints. The Ferry System reports complaints per 100,000 customers carried. This quarter experienced 3.8 complaints per 100,000 customers. This represents a 6% increase in complaints from the preceding quarter and a 4% increase from the same period last year

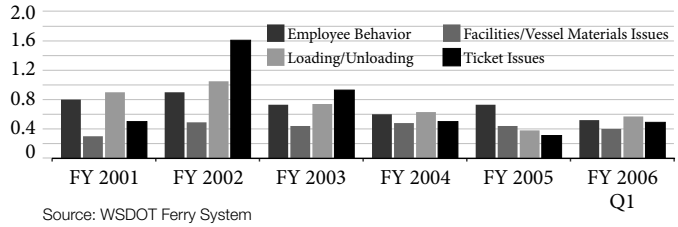
Total Number of Complaints per 100,000 Customers



Source: WSDOT Ferry System

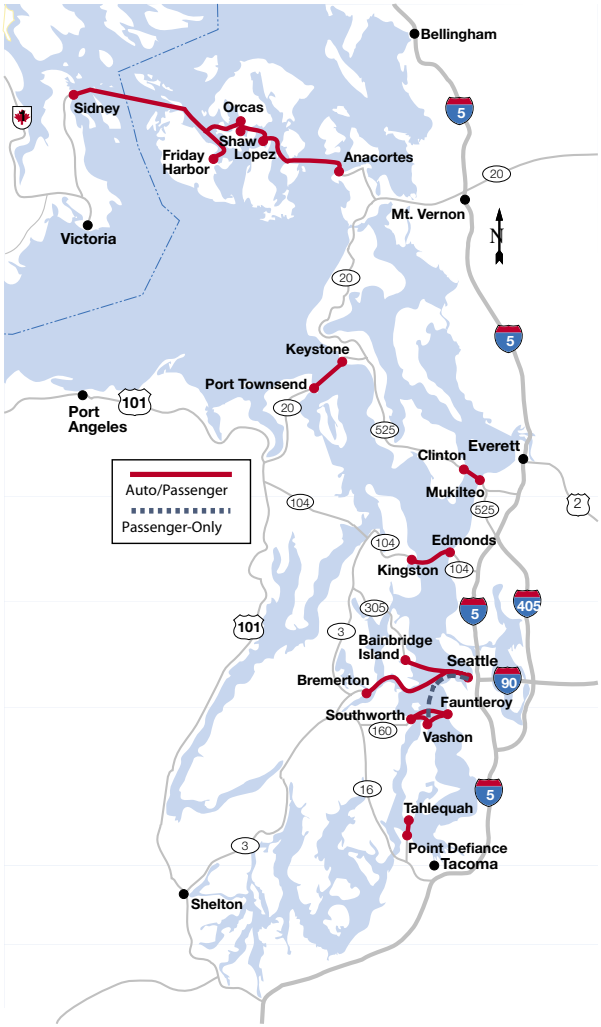
Loading/Unloading complaints were up 23% over the preceding quarter and 116% as compared to the same period last year. The Ferry System experienced a higher than normal number of complaints on multi-destination routes as result of summer volumes and lower on-time performance systemwide (see discussion under on-time performance). A total of 41 complaints were received in this category. Complaints about employee behavior were the second highest category this quarter with a total of 37 complaints or roughly one employee behavior complaint for every 200,000 customers served. Significantly, this represented a 45% improvement over the preceding quarter and a 20% improvement over the same period last year. Complaints about ticket issues were up 18% over the preceding quarter and were 84% higher than the same period last year. A total of 35 complaints were received in this category during this quarter. On a positive note, customer compliments were up 73% over the preceding quarter and 46% over the same period last year and were at the highest level in three years.

Common Complaints Per 100,000 Customers



Source: WSDOT Ferry System

The Issaquah Ferry serves vanpool operations that contribute to savings in miles traveled, fuel and highway capacity.



Washington State Ferries: Quarterly Update

Trip Reliability

Washington State Ferries scheduled 43,901 trips during the first quarter of fiscal year 2006. Of these trips, 109 were cancelled but 23 make-up trips were made. Total completed trips were 43,815. The chart at the right shows a system-wide average reliability index. Using this index, 0.8 ferry trips may be cancelled during the course of a year for a commuter making 400 trips to work 200 days per year. This suggests an average of 2.0 trips cancelled per thousand. This measure represents a 44% improvement in performance from the preceding quarter, and a 51% improvement from the preceding year's first quarter. The outstanding performance in the first quarter of fiscal year 2006 is the best on record and 35% higher than the previous record of 1.2. Timely and effective safety, maintenance and operating practices on vessels and terminals are contributing factors to this level of performance.

On-Time Performance

The table below compares on-time performance across the system for the fourth quarters of fiscal year 2005 and 2006. Comparing this quarter with the previous year's, the average delay time increased 11% to 4.8 minutes per sailing as compared to 4.3 minutes per sailing during the same period in fiscal year 2005. The number of trips sailing on-time (within 10 minutes of scheduled departure) decreased by 3% to 86% as compared to 89% during the same period last year and was 9% lower than the preceding quarter (94% for the 4th quarter in fiscal year 2005). The Maritime Security Level (MARSEC) was increased to level 2 during the period July 7 - August 12. Although primarily impacting the International and San Juan routes, the impact to on-time performance was felt throughout the system. Also contributing to lower performance during this quarter were increased rail traffic through Edmonds and waterfront construction in Seattle.

Average Missed Trip per Commuter

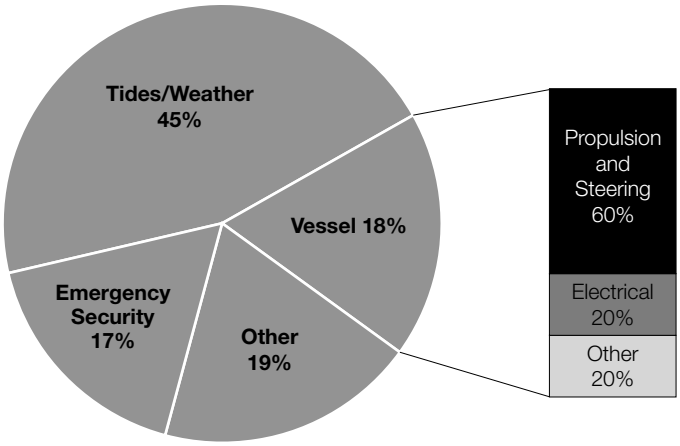
FY 2001	1.6
FY 2002	2.3
FY 2003	1.7
FY 2004	2.2
FY 2005	1.5
FY 2006 Qtr 1	0.8
FY 2006 Qtr 1[1]	**0.3**

[1] without Keystone-Pt. Townsend

A total of 47 trips were cancelled on the Port Townsend – Keystone route due to weather/tides. Excluding trips lost to tidal conditions at Keystone, the ferry system completed 99.91% of all trips and had a reliability index of 0.3. Per legislative direction, the ferry system continues to study alternative in-harbor options at Keystone.

Most Common Trip Cancellations

First Quarter, Fiscal Year 2006



On-time Performance - Washington State Ferry System

	1st Quarter FY 2005			1st Quarter FY 2006		
Ferries	**Number of Trips**	**Percent of Trips Within 10 Minutes of Schedule**	**All Trips Average Delay From Scheduled Sailing Time**	**Number of Trips**	**Percent of Trips Within 10 Minutes of Schedule**	**All Trips Average Delay From Scheduled Sailing Time**
San Juan Domestic	7,198	72%	8.3 Minutes	6,668	74%	6.9 Minutes
International Route	338	81%	5.8 Minutes	254	61%	12.6 Minutes
Edmonds - Kingston	4,554	87%	5.0 Minutes	4,517	79%	6.4 Minutes
Pass-Only Seattle-Bremerton	N/A	N/A	N/A	N/A	N/A	N/A
Pass-Only Seattle-Vashon	957	98%	1.7 Minutes	919	99%	1.8 Minutes
Fauntleroy-Vashon-Southworth	10,412	91%	3.4 Minutes	10,520	89%	3.8 Minutes
Keystone-Port Townsend	2,596	89%	4.2 Minutes	2,721	81%	5.9 Minutes
Mukilteo-Clinton	6,701	96%	2.7 Minutes	6,644	93%	3.5 Minutes
Pt. Defiance-Tahlequah	2,932	96%	3.0 Minutes	2,901	91%	4.3 Minutes
Seattle-Bainbridge Island	4,051	94%	3.8 Minutes	4,081	86%	5.5 Minutes
Seattle-Bremerton	2,531	95%	3.3 Minutes	2,355	97%	3.0 Minutes
Total	42,270	89%	4.3 Minutes	41,580	86%	4.8 Minutes

Washington State Ferries: Quarterly Update

Life Cycle Preservation Performance

Washington State Ferries plans to replace or refurbish 76 Category One systems and 82 Category Two systems during the 2005-07 Biennium. Through the first quarter of biennium, three Category One systems and eight Category Two systems have been replaced or refurbished.

Explanation of Key Terms

Systems Preserved - This measure focuses on performance of work planned and work delivered. The work measured is the number of terminal and vessel systems refurbished or replaced.

Life Cycle Rating - A life cycle rating is a percentage calculated by dividing the number of systems structures weighted by their costs that are within their life cycle by the total inventory of systems weighted by costs. This measure focuses on program performance. It reflects the favorable impact of the organization's work achieved offset by the unfavorable impacts of deferred preservation backlogs and on-going deterioration of the infrastructure.

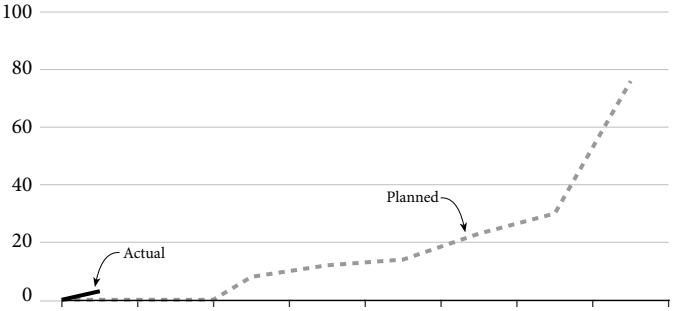
In January 2001, the Legislature's Joint Task Force on Ferries recommended that WSDOT work toward the objective of achieving a life cycle rating for Category One systems of between 90% and 100% and for Category Two systems of between 60% and 80%. The Task Force set FY 2011 as the target year for achieving this objective.

Category One systems are those designated by regulatory agencies as "vital" to the protection of people, the environment and infrastructure. Included are those vessel and terminal systems necessary to start, keep in motion, stop, land and unload a vessel.

Category Two systems are all other terminal and vessel systems.

Category One Terminal and Vessel Preservation Performance

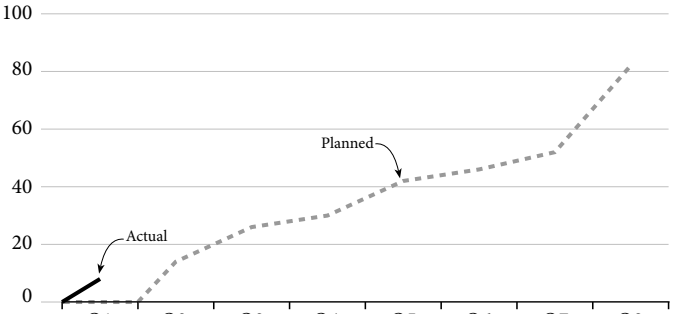
Cumulative Planned Projects vs. Actual Systems/Structures Preserved
Change in Life Cycle Cost Rating
1st Quarter, 2005-2007 Biennium



Source: WSDOT Ferry System

Category Two Terminal and Vessel Preservation Performance

Cumulative Planned Projects vs. Actual Systems/Structures Preserved
Change in Life Cycle Cost Rating
1st Quarter, 2005-2007 Biennium



Source: WSDOT Ferry System

Capital Expenditure Performance

WSDOT makes capital investments in the Ferry System through the Washington State Ferries Construction Program. The program preserves existing and builds new ferry terminals and vessels. This infrastructure gives the Ferry System the physical capability to deliver responsible and reliable marine transportation services to customers.

Biennium-to-date Terminal Construction activities are underspent by $1.8 million. Variances over $750,000 include the following: Anacortes Terminal spending is $2.5 million under plan. July construction activity did not occur as planned. System-wide project spending is $1.4 million over plan. This is due to advance purchases of steel that have not yet been distributed to construction projects. Friday Harbor Terminal spending is $0.9 over plan. Construction activities are ahead of schedule. Bainbridge Island Terminal spending is $0.8 million under plan. Construction work started later than expected on the preservation project.

Biennium-to-date Vessel Construction activities are underspent by $0.9 million. Variances over $750,000 include the

Washington State Ferries: Quarterly Update

following: MV Walla Walla preservation work is $2.2 million over plan. WSDOT underestimated the reappropriation needed to cover work slipping from the 2003-05 to the 2005-07 Biennium. New auto-passenger ferry construction is $2.2 million under plan. This is due to slower than planned billings from the manufacturer of propulsion equipment.

Ridership and Farebox Revenues

Ridership: Ridership overall was down 43,000 or 0.6% from the same period last year and 66,000 or 0.9% lower than the plan. Compared to the same period in 2005, traffic was flat - vehicles were even and there was a slight drop in passengers (1% or 42,000 riders).

The Hood Canal Bridge closure for two two-day periods caused a slight overall upward movement in traffic on the Port Townsend/Keystone, Mukilteo/Clinton and Seattle/Bremerton routes. The Bainbridge and Kingston routes dropped slightly due to the same reasons.

Foot passenger traffic to the San Juan Islands was down this summer. Recreational vehicles responded to the half off promotion fare on the Anacortes/Sidney, B.C. route, with traffic in the 20 to 49 foot vehicle category increasing 83%.

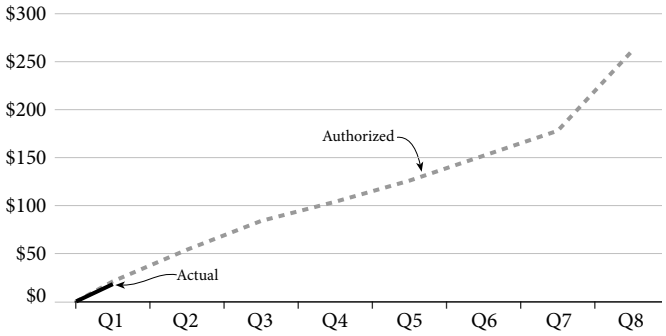
September also saw an above average increase in vehicles on the Bremerton and Fauntleroy/Southworth routes. Although it is difficult to make judgements based on a single month's trends, diversion of "drive-arounds" from the Narrows corridor due to both construction activities and the high price of gasoline could be contributing factors.

Farebox Revenues: Farebox revenue receipts are $2.4 million or 5.8% higher than the same period in fiscal year 2005 and were $313,000 or 0.7% higher than the plan.

Construction Program Expenditures

Washington State Ferry System

1st Quarter, 2005-2007 Biennium
Cumulative Dollars in Millions
Authorized vs. Actual

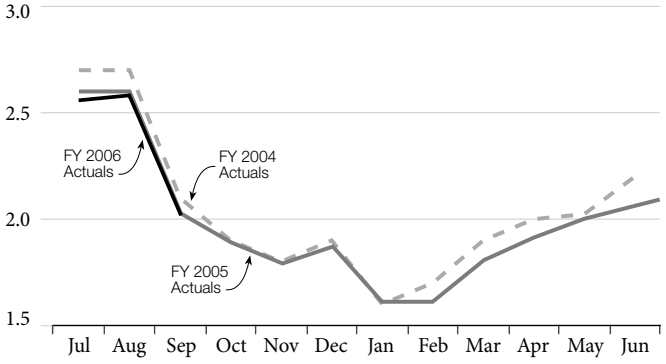


Source: WSDOT Ferry System

Ridership by Month

Washington State Ferry System

In Millions

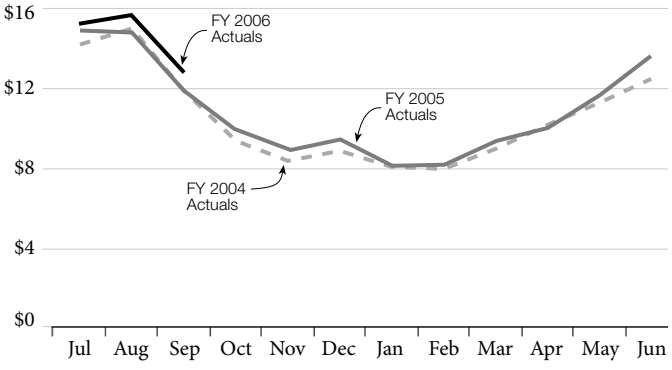


Source: WSDOT Ferry System

Farebox Revenues by Month

Washington State Ferry System

Dollars in Millions



Source: WSDOT Ferry System

Rail Quarterly Update:

State-Supported Amtrak *Cascades*

The months of July, August and September are typically the peak ridership months for Amtrak *Cascades*. This continued in 2005, with 121,146 riders taking state-supported Amtrak *Cascades* trains during the three-month period. This represents an 8.7% increase over the third quarter of 2004. September's ridership was nearly 15% higher than September 2004. This significant increase in ridership was driven by several factors, including higher fuel costs for automobile travel.

Evidence from around the country suggests that more people turned to transit and rail for their local and intercity trips as the average price for a gallon of gasoline reached three dollars. If fuel prices remain high, it is likely that Amtrak *Cascades* trains will experience ridership increases above the two to three percent annual growth of recent years.

Rail Plus Pilot Program Extended

In October 2004, WSDOT, Amtrak, and Sound Transit launched a pilot program to provide weekday rail travelers with more rail departure options between Seattle, Edmonds, and Everett. The Rail Plus program allows cross ticketing between Amtrak *Cascades* and Sounder trains. In the third quarter of 2005, Amtrak *Cascades* provided a total 861 rides to Rail Plus participants. The vast majority of these rides were taken on Amtrak *Cascades* train 516, departing Seattle at 5:30 p.m.

While the program is attracting only a limited number of riders each month, its popularity has grown steadily over the past year. For this reason, WSDOT, Amtrak, and Sound Transit recently extended the pilot program through June 2006.

On-Time Performance Drops to 61.2 Percent

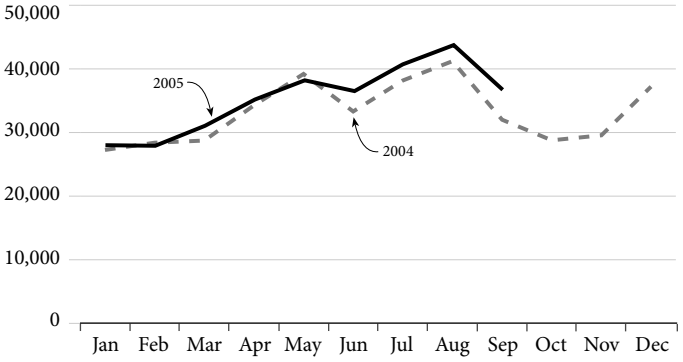
On-time performance for state-supported Amtrak *Cascades* averaged 61.2% in the third quarter of 2005. This compares to 72.4% on time for the third quarter of 2004. This quarterly average continues to be far below WSDOT's goal of 80% on time or better. Increasing freight rail congestion on the BNSF Railway Company mainline between Seattle and Portland and at the Canadian border contributed to this poor quarterly performance.

WSDOT is working with the BNSF Railway Company on several construction projects that will help support better on-time performance for Amtrak *Cascades*. Completion of these projects will help maintain the existing customer base and encourage travelers who use Amtrak *Cascades* for the first time to become repeat customers.

This image appeared in Amtrak *Cascades* advertisements that debuted in key markets in September.

State-Supported Amtrak *Cascades* Monthly Ridership

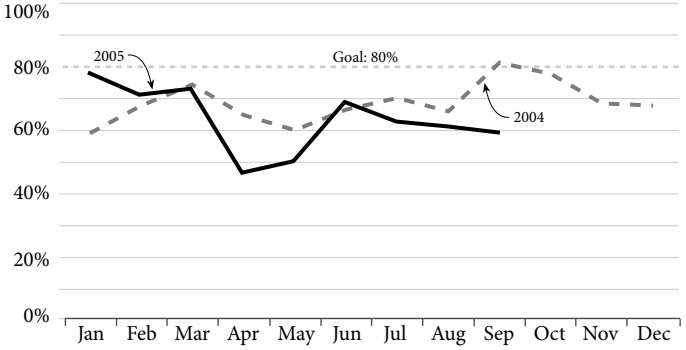
Number of Passengers



Source: Amtrak and WSDOT Rail Office.

State-Supported Amtrak *Cascades* On-time Performance

2005 vs. 2004 Percent On-Time



Source: Amtrak and WSDOT Rail Office.

The on-time performance goal for Amtrak *Cascades* is 80% or better. A train is considered on-time if it arrives at its final destination within 10 minutes or less of the scheduled arrival time.

Rail Quarterly Update:

State-Supported Amtrak *Cascades* and Grain Train

The new Skagit Station in downtown Mount Vernon
Photo courtesy Skagit Transit

Mount Vernon Station Use Increases by 19 Percent

In September 2004, Amtrak *Cascades* began stopping at Skagit Station. The new facility is located in the heart of downtown Mount Vernon. Skagit Station is reinforcing the axiom that the quality of a train station has a direct relationship to its use by the traveling public. Mount Vernon's previous station consisted of a small bus shelter and a portable restroom. The new station has a heated, indoor waiting area, restrooms, an espresso cart, a large, well-lit parking lot, and connections to local and regional transit.

WSDOT and Amtrak measure the volumes of people using each train station served by Amtrak *Cascades*. While Amtrak *Cascades* train schedules and levels of daily service at Mount Vernon have remained unchanged over the past year, passenger volumes at Mount Vernon have increased nearly 19%. Between October 2003 and September 2004, there were 16,758 boardings and de-boardings at the old station. Between October 2004 and September 2005, the total had risen to 19,908 boardings and de-boardings.

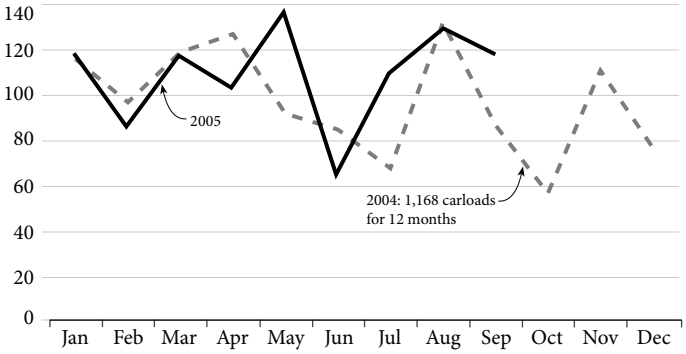
Washington Grain Train Market Demand Exceeds Supply

Carloads are defined as the number of state and port-owned grain cars used by shippers to transport grain to Washington ports along the Columbia River. Carloads for the third quarter increased 23% when compared with the third quarter of 2004. Carloads for the third quarter increased 15% when compared with the previous quarter of 2005.

An overall increase this quarter is attributed to the high demand for rail cars in the rail-barge shuttle service from Walla Walla. Market demand currently exceeds supply of hopper cars. WSDOT periodically makes use of residual funds from carload services to purchase rail cars to increase fleet size.

Washington Grain Train Carloads

Carloads per month 2005 vs. 2004



Source: WSDOT Rail Office.

The Washington Grain Train is a financially self-sustaining transportation program that supports the state's agricultural community while helping short line railroads maintain a sufficient customer base for long-term financial viability.

Highlights of Program Activities

Project Starts, Completions, or Updates

SR 18 Federal Way

Crews constructed a truck-climbing lane for westbound SR 18 between SR 167 and Weyerhaeuser Way. Ramps at Weyerhaeuser Way were modified and signals added. The project was completed in August.

SR 18 Maple Valley

A milestone for the widening and safety project on SR 18 east of Maple Valley was reached in late July when eastbound SR 18 traffic was switched to one lane of the new westbound roadway. The traffic switch was a major step toward completing the widening of SR 18 from two to four lanes between Maple Valley and Issaquah Hobart Road. Work started on the eastbound half of the new 244th Avenue SE interchange, new bridges over Taylor Creek and new eastbound lanes from SR 169 through 244th Avenue SE.

SR 99 Aurora Avenue Bridge, Seattle

Work to enhance safety on the State Route 99 Aurora Avenue Bridge in Seattle began in July. Crews raised the sidewalk and installed metal railing to enhance safety for vehicles and better separate vehicles from pedestrians and cyclists.

SR 161 Graham

Work to re-grade a portion of SR 161 (Meridian Avenue) between 194th and 200th streets to remove a dangerous hill on this half-mile section was completed in 53 hours, over one weekend in July. Once the hill was gone, the crew put down 1,900 tons of new asphalt and opened the road two hours ahead of schedule. According to the original plan, the job would have taken approximately 20 working days, increasing the expense and forcing the project into next year's construction season. This aggressive scheduling allowed the project to conclude ahead of schedule and under budget.

Regrading SR 161 and removing a dangerous hill on an accelerated schedule enabled crews to open the road ahead of schedule and under budget.

SR 161 Federal Way

Crews replaced two 18-inch-wide pipes under SR 161 (Enchanted Parkway) with a 12-by-6 foot-wide box culvert in late July. The new culvert will reduce flooding, and improve fish passage and habitat along Hylebos Creek. Work is part of a project to widen SR 161 to four lanes between Milton Road S. in Federal Way and Jovita Boulevard in Milton.

SR 169, Black Diamond

A project to pave a section of SR 169 between the Green River Bridge and State Route 516 started in July. Crews repaired four miles of pavement that included a section from the Green River Bridge to Lawson Street in Black Diamond, and one from Black Diamond-Ravensdale Road to the bridge over the railroad tracks in Maple Valley. Work was completed by September.

SR 503 Cougar

Work to restore the SR 503 Spur near Cougar to two lanes began July 25. The highway was reconstructed as part of Cowlitz PUD's existing Swift No. 2 Hydroelectric project. WSDOT managed the highway construction activities. A 500-foot long section of the SR 503 Spur was heavily damaged and has been restricted to one lane of travel since April 2002, following the failure of the Swift Power Canal embankment.

U.S. 2 & U.S .395, Spokane

Paving on the U.S. 2 and U.S. 395, Division and Ruby Street Couplet in Spokane began in August. The project will preserve the roadway and remove wheel ruts by grinding the existing roadway and repaving with asphalt. In addition, wheelchair ramps are being added at several intersections along the route. The work is scheduled for completion in early October.

I-5 Nisqually

Work to finish a paving job on I-5 from Nisqually River Bridge to Fort Lewis Road began in August and was completed in September. As part of this work, several sections of pavement in the left lane that had been placed in the 2004 construction season were removed and replaced because they did not meet WSDOT standards. A total of approximately three-fourths of a mile in four different areas of the left lane was ground out and replaced with new asphalt.

I-90 Snoqualmie Pass

The eastbound lanes of I-90 over Snoqualmie Pass were paved this summer. After motorists experienced excessive delays of three hours or more, the paving operation was moved to nighttime hours.

Highlights of Program Activities

SR 206 Spokane
Construction of a roundabout on SR 206 at the Bruce Road intersection near Spokane began in August and is scheduled for completion in October. The new intersection configuration will help reduce the number of major collisions at the intersection by replacing the existing stop signs with the slower speed roundabout.

Traffic travels in a one-way direction through this new roundabout intersection at SR 206 and Bruce Road near Spokane.

SR 544 Burlington
Major pavement repair work along Main Street in Everson started in August on State Route 544. The project includes repaving all nine miles of SR 544 from the Guide Meridian (SR 539) to SR 9. Crews will remove cracked and broken concrete panels along Main Street in Everson and repair a quarter-mile section of SR 544 near Noon Road that routinely settles in the winter months. Work is scheduled for completion in October.

I-205 Vancouver
I-205 in Vancouver between SR 500 and the I-5 merge in Clark County received some much needed rehabilitation work this summer. This segment hasn't had a major overhaul since the interstate was first built in the 1970s and 80s. The concrete rehabilitation project replaced over 150 concrete panels and stabilized the remaining concrete panels by connecting them with steel rods, or "dowel bars." The final part of the I-205 concrete rehabilitation project includes grinding the surface of the concrete to make the roadway smooth. Work was completed in September.

I-5 Tacoma
WSDOT replaced damaged roadway panels on a four-mile section of southbound I-5 from 56th to 96th streets in Tacoma in August. The project reduced the southbound freeway to one lane on two consecutive nights and compressed the work into one weekend. Crews used a fast setting concrete to replace the panels and performed other maintenance work, such as replacing lane markers while the concrete cured to take advantage of the freeway closure.

SR 202 Woodinville
On August 15, crews began resurfacing more than four miles of pavement on the Woodinville Redmond Road, also known as SR 202. Workers removed damaged pavement with asphalt and sealed cracks in the road. In addition to new pavement other upgrades include new traffic loops, signs, and pavement markings. The project is scheduled for November completion.

SR 409 Cathlamet
Preservation work on the Julia Butler Hanson Memorial Bridge on SR 409 south of Cathlamet in Wahkiakum County began on August 16, after the Osprey nesting season. Crews replaced the expansion joints and resurfaced the north half of the bridge's deck.

SR 410 Mt. Rainier National Park
Crews resurfaced nearly six miles of SR 410 between Crystal Mountain Boulevard in the northeast corner of the park and Cayuse Pass. The pavement on this section of SR 410 is old and badly damaged. Work was completed in September.

SR 16 Ramp Meters
WSDOT activated its first ramp meters in Pierce County on SR 16 on August 30. Five eastbound SR 16 on-ramps between SR 302 (Purdy) and the Tacoma Narrows Bridge are now being monitored: SR 302, Burnham Drive, Wollochet Drive, Olympic Drive NW, and 36th Street NW. Ramp meters are stop-and-go traffic signals placed on highway entrance ramps. They create a short delay between cars entering the highway, resulting in a more even traffic flow that provides faster overall travel times and fewer collisions at merge points.

U.S. 2 Monroe
Crews on August 24 finished paving the U-turn pockets for the future widened intersections on U.S. 2, from 179th to Woods Creek. This work allows crews to move traffic to the south side of the intersections as work begins on the north side. When this project is complete, medians and curbing will replace two-way left-turn lanes and the widened intersections will allow U-turns.

I-90 Vantage
Construction began in February to build new on and off ramps for SR 26 at I-90 on the east end of the Vantage Bridge. The old ramps were sharp and steep, and when coupled with frequent high winds, they contributed to many truck flip-over accidents. The new ramps were lengthened to allow

trucks and cars more time and space to merge. Also, moving the westbound on-ramp to a straight section of I-90 makes it easier for merging with traffic on I-90. Crews completed the $4.2 million project just in time for Labor Day travels and well ahead of the originally planned mid-October finish date.

SR 20 Mazama

Work began in September at Little Boulder Creek, which runs under SR 20 near Mazama. Crews will remove a 6-by-9-foot steel plate arch and replace it with a 26-foot bottomless steel pipe arch that will allow fish passage in a more natural environment. Work is scheduled to be completed by late October.

U.S. 97 Tonasket

Paving work wrapped up during the week of August 29 for a 13-mile project south of Tonasket on U.S. 97 in Okanogan County. The $3.5 million project increases the load bearing capacity of the highway and increases safety with centerline rumble strips, guardrail, and wider lanes and shoulders.

SR 285 Wenatchee

Crews finished paving on three miles of SR 285 through Wenatchee. The $2.1 million project included repairs of six intersections on nearby highways: two on U.S. 2/U.S. 97 at Cashmere and four on SR 28 in East Wenatchee.

I-5 Everett

One of the biggest transportation projects to come out of the 2003 Legislature, the I-5 Freeway and HOV Expansion project in Everett, officially broke ground on September 9. When this project is completed in 2008, drivers will see a wider, faster and safer I-5 between the Boeing Freeway and U.S. 2. Crews will build an HOV lane in both directions for carpools, vanpools and transit. An additional lane will be built between 41st Street and U.S. 2, giving drivers more space to merge on and off the freeway. By next fall, solo drivers will be able to take a new right-hand Broadway fly-over ramp. Transit users will be able to use the old left-hand exit, a natural location for a large vehicle already using the HOV lane.

I-90 Snoqualmie Pass Emergency Work

WSDOT hired general contractor Scarsella Brothers for emergency work along I-90 where a portion of the rock cliff fell onto the highway lanes, causing three fatalities on September 11. After a second smaller slide in the same area dropped a 10-ton boulder onto the shoulder on September 12, WSDOT closed two of the three I-90 westbound lanes west of the summit. Scarsella Brothers is installing rockfall fencing to protect traffic from debris while scaling, drilling, bolting, and rock removal work is done. A second, temporary lane was built on the highway shoulder to accommodate traffic during this work.

SR 21 Odessa

During September, workers completed the realignment of SR 21 (Alder Street) in Odessa. The project was done in partnership with the City of Odessa to rebuild portions of SR 21 and eliminate two 90-degree corners. In addition, the project added a new railroad crossing and resurfaced Alder Street.

I-5 Federal Way

Crews started work on September 12 to rebuild an intersection near the new Federal Way Transit Center as a roundabout. The rebuilt intersection will tie in the new South 317th Street bridge from the I-5 high occupancy vehicle (HOV) lanes. This work is part of a WSDOT and Sound Transit project to build HOV on and off-ramps in the I-5 median connecting to a new bridge at South 317th Street.

SR 9 Woodinville

An event was held on September 22 to mark the start of construction on an SR 9 widening project north of Woodinville. The $33 million project will widen two miles of SR 9 for a four-lane highway with a raised center median to eliminate head-on collisions. Work includes bus pullouts at two intersections, right and left-turn lanes, and stormwater treatment facilities as well as sidewalks and bike lanes. SR 9 is the only major north-south roadway on the east side of Snohomish County and the only major alternative to I-5.

Public Transportation and Commute Trip Reduction

WSDOT Terminate I-5 Vancouver HOV Lane Pilot Project

In August, WSDOT announced its decision to conclude the I-5 Vancouver High Occupancy Vehicle (HOV) lane pilot project, and convert it back to a general purpose lane. WSDOT's decision concurred with the recommendations made by the Southwest Washington Regional Transportation Council Board after thorough review of the data in the six evaluation reports of the HOV lane's performance since the pilot project began in 2001.

Highlights of Program Activities

Ferries

Passenger-Only Service Changes for Vashon
Washington State Ferries (WSF) made service changes to the Vashon passenger-only ferry service on September 19. The service changes meet a legislative mandate to implement part-time shifts and cut service hours from 16 hours to eight hours per day, Monday through Friday. The new schedule cuts morning service from Vashon from four sailings to two, and afternoon service from Seattle from four sailings to two. WSF worked closely with the Vashon and Southworth Ferry Advisory Committees to develop a schedule that retains service on the most popular sailings and cuts those with the lowest ridership. Although the service hours have been reduced by eight hours per day, the new schedule will still accommodate, on average, 70% of the current passenger-only customers, with little adjustment to their regular travel schedule.

Aviation

WSDOT Partners with Air Safety Foundation on Flight Instructor Clinics
WSDOT and Aircraft Owners and Pilots Association Air Safety Foundation (ASF) teamed up to offer Certificated Flight Instructor (CFI) refresher clinics to instructors in our state. On September 10-11, WSDOT and ASF held a CFI clinic in Spokane. Subsequent clinics will be offered in the Seattle area in January, May, and September of 2006. Exact dates of the 2006 clinics will be determined later this year and posted on both WSDOT Aviation's Web site: www.wsdot.wa.gov/aviation, and ASF's Web site: www.aopa.org/safetycenter.

WSDOT Awards $5.7 Million in Local Airport Aid Grants
WSDOT's Aviation Division announced that $5.7 million in state, federal and local match funds will be used for 23 different airport improvement projects in the state. A total of 20 public use airports in Washington State will benefit from this round of grants. Through its Local Airport Aid Grant Program WSDOT awarded approximately $1.2 million in state grants to fund these airport projects. Of that amount, WSDOT used $88,493 to leverage over $3.4 million in federal funds. Detailed information about grant recipients and project types is available at: www.wsdot.wa.gov/aviation/news/2005/AirptAidGrants05-07.htm.

Improved Motorist/Project Information

New Traffic Cameras Available Online for SW Washington Highways
WSDOT installed new traffic cameras along U.S. 101 and SR 401 at the Washington approach to the Astoria Megler Bridge in Pacific County, and on the SR 14 approach to the Hood River Bridge near Bingen in Klickitat County. Anyone with Internet access can view images from the camera by visiting WSDOT's Traffic and Roads Web page (www.wsdot.wa.gov/traffic/).

Grants and Awards

Outstanding Local Projects Chosen for Awards by WSDOT and FHWA
WSDOT and the Federal Highway Administration chose the cities of Des Moines and Lynnwood, as well as Yakima and Douglas counties for Awards of Excellence. The awards recognize the "best of the best" of local agency transportation projects that are federally funded. The awards went to: City of Des Moines – Best City Project, Douglas County – Best County Project, City of Lynnwood – Best Special Project, and Yakima County – Director's Award.

Three Washington Byways Receive Federal Designation
Federal Highway Administration officials announced that three Washington State Scenic Byways are being elevated to federally designated byways: the International Selkirk Loop, the Coulee Corridor and the Stevens Pass Greenway. The number of Washington state byways that have received federal designation increases from three to six. The National Scenic Byways Program was established to help recognize, preserve, and enhance selected roads throughout the United States. Known as "America's Byways," roads in the Scenic Byways program are cherished for their scenic, natural, recreational, historic, cultural, or archaeological qualities.

Gray Notebook
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Americans with Disabilities Act (ADA) Information

Persons with disabilities may request this information be prepared and supplied in alternate formats by calling the Washington State Department of Transportation at (360) 705-7097. Persons who are deaf or hard of hearing may call access Washington State Telecommunications Relay Service by dialing 7-1-1 and asking to be connected to (360) 705-7097.

Civil Rights Act of 1964, Title VI Statement to Public

Washington State Department of Transportation (WSDOT) hereby gives public notice that it is the policy of the department to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, and related statutes and regulations in all programs and activities. Persons wishing information may call the WSDOT Office of Equal Opportunity at (360) 705-7098.

Other WSDOT Information Available

The Washington State Department of Transportation has a vast amount of traveler information available (including Puget Sound area traffic, mountain pass reports, highway closures, ferry schedules, and more). Call the WSDOT statewide toll-free number: 1-800-695-ROAD. In the Seattle area: (206) DOT-HIWY [368-4499].

For additional information about highway traffic flow and cameras, ferry routes and schedules, Amtrak Cascades rail, and other transportation operations, as well as WSDOT programs and projects, visit www.wsdot.wa.gov

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